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International Exhibition

1876

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# INTERNATIONAL EXHIBITION OF 1876

## PHILADELPHIA.

PRINTED BY ORDER OF THE CANADIAN COMMISSION OF THE  
INTERNATIONAL EXHIBITION OF 1876.

### SYSTEM OF CLASSIFICATION.

*Subject to revision.*

The classification embraces ten departments :

- I. RAW MATERIALS—MINERAL, VEGETABLE, AND ANIMAL.
- II. MATERIALS AND MANUFACTURES USED FOR FOOD OR IN THE ARTS, THE RESULT OF EXTRACTIVE OF COMBINING PROCESSES.
- III. TEXTILE AND FELTED FABRICS; APPAREL, COSTUMES, AND ORNAMENTS FOR THE PERSON.
- IV. FURNITURE AND MANUFACTURES OF GENERAL USE IN CONSTRUCTION AND IN DWELLINGS.
- V. TOOLS, IMPLEMENTS, MACHINES, AND PROCESSES.
- VI. MOTORS AND TRANSPORTATION.
- VII. APPARATUS AND METHODS FOR THE INCREASE AND DIFFUSION OF KNOWLEDGE.
- VIII. ENGINEERING, PUBLIC WORKS, ARCHITECTURE, &c.
- IX. PLASTIC AND GRAPHIC ARTS.
- X. OBJECTS ILLUSTRATING EFFORTS FOR THE IMPROVEMENT OF THE PHYSICAL, INTELLECTUAL, AND MORAL CONDITION OF MAN.

Each department will be divided into ten groups and one hundred classes, to facilitate the arrangement and display of the various articles placed on exhibition. The following table will serve as a

### KEY TO THE GROUPS AND CLASSES.

| Depts. | Groups. | Classes.  |
|--------|---------|-----------|
| I.     | 10—19   | 100—199   |
| II.    | 20—29   | 200—299   |
| III.   | 30—39   | 300—399   |
| IV.    | 40—49   | 400—499   |
| V.     | 50—59   | 500—599   |
| VI.    | 60—69   | 600—699   |
| VII.   | 70—79   | 700—799   |
| VIII.  | 80—89   | 800—899   |
| IX.    | 90—99   | 900—999   |
| X.     | 100—109 | 1000—1099 |

## DEPARTMENT I.

### RAW MATERIALS—MINERAL, VEGETABLE, AND ANIMAL.

#### GROUP 10.

MINERALS, ORES, BUILDING-STONES, METALS, AND METALLURGICAL PRODUCTS.

CLASS 100.—METALLIC AND NON-METALLIC MINERALS, EXCLUSIVE OF COAL AND OIL; collections of minerals systematically arranged; collections of ores and associated minerals; geological collections, aerolites.

CLASS 101.—METALLURGICAL PRODUCTS.—Iron and steel, copper, lead, zinc, antimony, and other metals, the result of extractive processes, with specimens of slags, fluxes, residues, and products of metallurgical processes.

CLASS 102.—MINERAL COMBUSTIBLES, such as coal, mineral tar, and petroleum.

[This class will include anthracite, semi-bituminous, and bituminous coals; cannel coal, jet, brown coal, and lignite; specimens of coal-waste, and of pressed coal; albertite, asphalt, and asphaltic limestones; bitumen of India, Trinidad, Mexico, California and other localities; crude mineral tar, petroleum in its crude state as taken from the oil-springs or wells.]

CLASS 103.—BUILDING STONES, MARBLES, SLATES, &c.—Specimens in the rough and hewn, sawed or polished, of granite, syenite, porphyry, sandstone, limestone, marble, alabaster, serpentine, or other rocks, used either for foundation or superstructure of buildings, bridges, walls or other constructions, or for interior decoration in floors, columns, wainscoting, &c., or for furniture.

Specimens of marble of all colors and grades—white, black, or colored—used either in buildings, for decoration, for statuary, monuments, or for furniture, in blocks or slabs not manufactured.

Slates in masses, slabs, and split into the various sizes used for roofing.

[For tiles, marble and slate mantels, &c., see Departments II and IV.]

CLASS 104.—CLAYS, KAOLIN, SILIX, and other materials for the manufacture of porcelain, faience, and of glass, bricks, terra-cotta, and tiles and fire-brick. Refractory stones for lining furnaces, sandstones, steatite, &c., and refractory furnace materials.

CLASS 105.—LIME, CEMENT, AND HYDRAULIC CEMENT of all grades, raw and burned, accompanied by specimens of the crude rock or material used.

CLASS 106.—LITHOGRAPHIC STONES, HONES, WHETSTONES, GRINDSTONES, GRINDING AND POLISHING MATERIALS, such as sand, quartz, garnets, crude topaz, diamond, corundum, emery in the rock or pulverized, and in assorted sizes and grades, as sold for abrading purposes.

CLASS 107.—MINERAL WATERS, ARTESIAN WELL WATERS, natural brines, saline and alkaline effluences and solutions.

CLASS 108.—MINERAL, FERTILIZING SUBSTANCES, such as gypsum, phosphate of lime, marls, shells, coprolites, &c.—not manufactured.

CLASS 109.

#### GROUP 11.

### AGRICULTURAL PRODUCTS USED CHIEFLY FOR FOOD.

CLASS 110.—CEREALS AND GRASSES, including straw, hay, corn, and various kinds of fodder.

CLASS 111.—ROOT CROPS. — Potatoes, turnips, beets, carrots, parsnips, onions, &c.

CLASS 112.—GREEN VEGETABLES. — Cabbages, cauliflowers, kale, beans, peas, squashes, egg-plants, cucumbers, tomatoes, melons, pumpkins.

CLASS 113.—FRUITS OF TEMPERATE AND SUBTROPICAL REGIONS.—Apples, pears, quinces, peaches, nectarines, abricots, plums.

CLASS 114.—TROPICAL FRUITS.—Oranges, bananas, plantains, lemons, pine-apples, pomegranates, figs, cocoa-nuts.

CLASS 115.—GRAPES AND GRAPE CULTURE.—[This class will include all varieties of the grape under cultivation, whether raised under glass or not, though the locality and method of raising will in all cases be stated with the specimens sent. It is desirable to have a very full representation of the various kinds now raised in such perfection in the open air in California, such as the Black Hamburg, Flaming Tokay, Muscat, &c.]

CLASS 116.—SMALL FRUITS, BERRIES, &c.—Strawberries, raspberries, blackberries, blueberries, whortleberries, cherries, &c.

CLASS 117.—DRIED FRUITS OF ALL KINDS.—Raisins, figs, prunes, plums, prunellas, dates, apples, pears, peaches, cherries, &c.

CLASS 118.—DRIED VEGETABLES AND SEEDS, EXCLUSIVE OF CEREALS, INCLUDING GARDEN AND FLOWER SEEDS.—Peas, beans, pulse, &c.

CLASS 119.—NUTS.—Cocoa-nuts, ivory nuts, and the various tropical and other nuts and seeds used for food or in the arts.

#### GROUP 12.

##### ARBORICULTURE AND FLORICULTURE.

CLASS 120.—FRUIT TREES, and methods of rearing and transplanting.

CLASS 121.—ORNAMENTAL TREES AND SHRUBS, and methods of rearing and transplanting.

CLASS 122.—ANNUAL AND PERENNIAL FLOWERING PLANTS, grown in the open air, to be exhibited in successive periods according to the season.

CLASS 123.—HOT HOUSE AND CONSERVATORY PLANTS, and management of them; hot-beds, forcing and propagating houses.

CLASS 124.—FRUIT TREES, under glass.

CLASS 125.—ORCHIDS AND PARASITIC PLANTS and their management or treatment.

CLASS 126.—FERNS, and the best method of growing them under glass in hot-houses, or in cases, or in the open air; ferneries.

CLASS 127.—CACTACEA.

CLASS 128.—AQUATIC PLANTS.

CLASS 129.—GROWING CROPS.—Grasses, cereals, tubers, roots, kitchen-garden vegetables, and methods of growing.

#### GROUP 13.

##### FOREST PRODUCTS.

CLASS 130.—LOGS AND SECTIONS OF TREES, samples of wood and timber of all kinds generally used in construction or manufactures, either in the rough or hewed, sawed or split, including square timber, joists, scantling, plank, and boards of all sizes and kinds commonly sold for building purposes. Also ship-timber, as used in ship-building, or for masts and spars; piles; timber for fencing, for posts, or for timbering shafts of mines. Miscellaneous collections of wood illustrative of the various kinds and the purposes to which they are applied.

CLASS 131.—WORKED TIMBER OR LUMBER, in form of clapboards, shingles, sheathing or flooring-casings, moldings, and stair-rails.

CLASS 132.—ORNAMENTAL WOOD, used in decorating and for furniture; veneers of hard and fancy woods; mahogany logs, crotches and veneers; rose-



wood, satin-wood, ebony, bird's-eye maple, madrona, black-walnut veneers, and other fancy woods, suitable for and used for ornamental purposes.

CLASS 133.—TIMBER PREPARED IN VARIOUS WAYS TO RESIST DECAY; kyanized timber.

CLASS 134.—DYEING, TANNING AND COLORING.—Dyewoods, barks, and various vegetable substances in their raw state, used for dyeing and coloring.

a. Logwood, Brazil-wood, peach-wood, fustic, sumac.

b. Barks of various kinds, Brazilian, accacias, oak, hemlock, murici, bicida, gordonia.

c. Galls, excrescences, and abnormal woody products.

d. Mosses used for dyeing and coloring.

CLASS 135.—CELLULAR SUBSTANCES.—Corks and substitutes for corks, of vegetable growth; porous woods for special uses; pith, rice, paper, &c.

CLASS 136.—LICHENS, MOSSES, PULU, FERNS, and vegetable substances used for bedding, for upholstery, or for mechanical purposes, as teazels, Dutch rushes, scouring grass, &c.

CLASS 137.—GUMS, RESINS, VEGETABLE WAX OR TALLOW WAX, HONEY, including caoutchouc, senegal, tagacanth, Arabic, myrrh, copal, &c.

CLASS 138.—SEEDS AND FRUITS, for ornamental purposes; vegetable ivory, coquilla nuts, cocoa-nut shells, ganitrus beads, bottle gourds, &c.

CLASS 139.—MISCELLANEOUS PRODUCTS.

#### GROUP 14.

AROMATIC, OLEAGINOUS, SAPONAGEOUS, STIMULATING, AND NARCOTIC SUBSTANCES OF VEGETABLE GROWTH, VEGETABLE DRUGS AND PERFUMES.

CLASS 140.—TOBACCO OF ALL VARIETIES, and in its various stages of growth and curing, in the leaf and crude or manufactured.

CLASS 141.—SEEDS FROM WHICH OIL IS EXPRESSED.—Cotton seed, mustard seed, rape seed, linseed, sun-flower seed, olives, palm-nuts, castor beans, oil-cake, and residues of the oil manufacture.

CLASS 142.—SPICES AND CONDIMENTS.—Pepper, cinnamon, mace, nutmegs, cloves, capsicum, vanilla, pimento, cardamons, ginger, mustard.

CLASS 143.—TEA AND THE VARIOUS SUBSTITUTES FOR TEA USED IN DIFFERENT COUNTRIES.—Of teas, all varieties, and in the various stages of preparation for the market, and in the various styles and modes of packing.

CLASS 144.—COFFEE, CHOCOLATE, COCOA, CHICORY, AND THE VARIOUS SUBSTITUTES FOR COFFEE.

CLASS 145.—PLANTS, FLOWERS, ROOTS, LEAVES, AND HERBS, USED IN REER-MAKING AND IN PHARMACY.—Hops, sarsaparilla, winter-green, spruce-leaves, cinchona, cascarilla, cusparia, and other barks.

CLASS 146.—SAPONAGEOUS PLANTS, LEAVES, ROOTS, SEEDS, BARKS, &c.

CLASS 147.—VEGETABLE DRUGS AND PERFUMES.

CLASS 148.

CLASS 149.

#### GROUP 15.

FIBROUS SUBSTANCES OF VEGETABLE OR OF ANIMAL ORIGIN USED IN THE ARTS.

CLASS 150.—COTTON IN THE BOLL, and cleansed from seeds, as ready for the market, and of all grades and varieties—uplands, low middling, sea island, Chinese, Indian, &c.

CLASS 151.—FLAX, HEMP, JUTE, RAMIE, &c., in their various stages of

preparation, and all similar fibers, such as the *cabouya*, of Santo Domingo; from plants of the aloe family, pine-apple fiber, China grass, nettle fiber, plantain; substitutes for hemp.

CLASS 152.—COIR OR COCOA-NUT FIBER, and other similar substances.

CLASS 153.—WOOL IN THE FLEECE, in bales, or carded.

CLASS 154.—SILK IN COCOONS AND REELED.

CLASS 155.—HAIR FOR TEXTILE PURPOSES, for cordage, for plastering, bedding, upholstering, &c.; for making hair-cloth for covering furniture, for sieves, &c.; for making wigs, curls, fronts, switches, &c.

[For manufactured hair-work used as clothing or adornment, see Department III.]

#### GROUP 16.

##### ANIMALS, LIVE STOCK, ETC.

CLASS 160.—HORSES, ASSES, MULES.

CLASS 161.—BULLS, COWS, OXEN, SHEEP.

CLASS 162.—GOATS, ANGORA GOATS, ALPACA, LLAMA, CAMEL.

CLASS 163.—SWINE, AND METHODS OF REARING, FEEDING, &c.

CLASS 164.—DOGS FOR HUNTING, WATCH-DOGS, COACH-DOGS, AND ALL OTHER VARIETIES.

CLASS 165.—WILD ANIMALS.—Living wild animals from various countries; elk, deer, antelope, buffalo, bears, wolves, wild-cats, and other animals, from the Western States and Territories; stuffed skins.

CLASS 166.—POULTRY AND DOMESTIC FOWL OF ALL KINDS, WITH SPECIMENS OF THEIR CAGES, POULTRY-YARDS, &c.

CLASS 167.—CAGE BIRDS, AVIARIES, &c.

CLASS 168.—REPTILES AND BATRACHIANS.—Turtles, terrapins, frogs, &c.

CLASS 169.—INSECTS.—Honey-bees, silk-worms and silk-worm eggs, silk spiders; insects injurious to vegetation or otherwise.

#### GROUP 17.

##### FISH AND AQUATIC LIFE AND FISH PRODUCTS.

CLASS 170.—MARINE MAMMALS.—Seals, cetaceans, &c.; specimens living in aquaria, or stuffed, salted, preserved in alcohol or otherwise.

CLASS 171.—FISHES, LIVING OR PRESERVED.

CLASS 172.—PICKLED FISH, AND PARTS OF FISH USED FOR FOOD.

CLASS 173.—FISH, OR PARTS OF FISH, caviar, sharks' fins, salted, smoked, dried, or otherwise preserved for food.

CLASS 174.—CRUSTACEANS, ECHINODERMS, BECHE DE MER.

CLASS 175.—MOLLUSKS.—Oysters, clams, &c., used for food.

CLASS 176.—FISH OR FISH-PRODUCTS used in agriculture or manufactures. Fish-glue, isinglass, sounds, fish-oil, &c. (See also class 184 and 220.)

CLASS 177.—SPONGES, SEA-WEED, AND OTHER MARINE GROWTHS USED FOR FOOD OR IN THE ARTS.—Algæ, kelp, &c.; sponges, sea-fans, gorgonia, &c.

CLASS 178.—SHELLS, CORAL, PEARLS, &c.—Mother-of-pearl, haliotis, unio, and other shells of iridescent pearly luster; conch shells, finely colored, used for cameos and for other purposes; collections of shells systematically arranged, characteristic of each country. Coral of all qualities and shades of color, in its crude state, and as sold in commerce. Pearls of all sizes, colors, and forms, as found—not mounted.

CLASS 179.—WHALEBONE, SHAGREEN, &c.

GROUP 18.

ANIMAL PRODUCTS USED AS FOOD OR AS THE BASIS OF MANUFACTURES,  
EXCLUSIVE OF AQUATIC PRODUCTS.

CLASS 180.—THE DAIRY.—MILK, EGGS, CREAM, BUTTER, CHEESE, &c.; lard, tallow, fats of all kinds. (For spermaceti, &c., see class 222.)

CLASS 181.—SKINS, PELTRIES, FURS AND FEATHERS.

a. *Skins and Furs*.—Buffalo, bear, beaver, wolf, fox, muskrat, otter, seal, mink, ermine, sable and marten, hare and rabbit, lamb, sheep, goat, squirrel, chinchilla, and cat skins, and mats. Skins from the tropics, of the lion, tiger, leopard, panther, zebra, antelope, &c. Skins of the deer, elk, or horse, tanned or dried with the hair on.

b. *Feathers*.—Of the goose, oider duck, or other fowl, used for bedding; for ornament, as the ostrich, marabout, rhea or vulture, osprey, emu birds of paradise, heron, ibis, swan, turkey-cock, peacock, pheasant (common, copper, or golden,) eagle and other plumes. Also skins of birds used for clothing.

CLASS 182.—LEATHER, PARCHMENT, AND VELLUM, of the various kinds and styles of finish. Oak-tanned leather, hemlock-tanned, dyed leather, enameled or "patent-leather," curried leather, calf, kip, and seal skin, morocco for shoes, book-binding, and pocket-books; for covering furniture &c. Harness and saddlery leather: pigskin; Russia leather, sheepskin, buckskin, chamois. Parchment for commissions, patents, deeds, diplomas, &c. Vellum for similar purposes, and for books and book-binding; for drums and tamborines, for gold-beaters' use, &c.

CLASS 183.—IVORY, BONE, HORN, WALRUS TEETH, TORTOISE SHELL.

CLASS 184.—GLUE, GELATINE, ISINGLASS, BLOOD AND ITS PREPARATIONS.  
[See also class 176.]

CLASS 185.—ANIMAL PERFUMES.—Musk, castoreum, civet, ambergris, &c., in their crude state, not manufactured. [For animal oils, &c., see class 220.]

GROUP 19.

PRESERVED MEATS, VEGETABLES AND FRUITS.

CLASS 190.—SALTED OR PICKLED MEATS.—Salt beef, pork.

CLASS 191.—DRIED AND SMOKED MEAT.—Dried beef and jerked beef as prepared in Mexico, California, and dry countries, smoked and dried beef, and pork, hams, bacon, sausages, Bologna sausages, &c.

CLASS 192.—CANNED MEATS, MILK, including fish, flesh and fowl, patés, sardines, &c. (Lobster, oysters.)

CLASS 193.—VEGETABLES, desiccated, or in cans or glass hermetically sealed, tomatoes, corn, asparagus, &c.

CLASS 194.—PICKLES, CHAMPIGNONS, TRUFFLES.

CLASS 195.—FRUITS IN CANS OR IN GLASS, preserved in sirup or alcohol.

CLASS 196.—JELLIES, JAMS, MARMALADES.

DEPARTMENT II.

MATERIALS AND MANUFACTURES USED FOR FOOD, OR IN THE ARTS, THE  
RESULT OF EXTRACTIVE OR COMBINING PROCESSES.

GROUP 20.

EXTRACTS AND COMPOUNDS OF ANIMAL OR VEGETABLE ORIGIN, USED CHIEFLY  
FOR FOOD.

CLASS 200.—STARCH AND ITS MANUFACTURE.—Starch from all sources, from grain, potatoes, or other tubers, arrow-root, plantain meal, cassava meal,



amaria starch of Santo Domingo, and of Australia; manioca, tous-les-mois, tapioca, sago and pearl flour.

CLASS 201.—SUGAR, MOLASSES, AND SIRUPS.—Molasses and sirups from all sources, from the sugar-cane, sorghum, the maple or palm, from beets or fruit; and sugar in its various forms and stages of preparation, from the brown crude sugars to the crystallised white loaf.

CLASS 202.—CONFECTIONARY.

CLASS 203.—ALCOHOL AND SPIRITUOUS LIQUORS.—Wine, cider, brandy, rum, whisky, gin, pisko, saki, samshoo.

a. Ordinary red and white wines, sweet and mulled wines, sauterne, claret, hock, catawba, sparkling wines, cider, perry, and other fermented drink made from the juice of fruit. Fermented drinks drawn from vegetable saps, milk, or saccharine substances of any kind.

b. *Distilled Liquors*.—Rum, brandy, whisky, gin, pisko, proof-spirit.

c. *Cordials*.—Absinthe, Curaçoa, kirschwasser, &c.

CLASS 204.—MALT LIQUORS, SMALL BEER, AND SODA-WATER.—Beer, ale, porter or stout, lager-beer, root-beer, ginger-beer, ginger-ale, soda-water with or without various sirups, bottled or in fountains.

CLASS 205.—BREAD, CAKE AND PASTRY.—The various forms and kinds of bread and rolls, cake and pastry, with or without yeast.

CLASS 206.—BISCUIT, CRACKERS, PASTES, &c.—Sea-biscuit or pilot-bread, water, milk and butter crackers, fancy crackers, Albert biscuit, ginger biscuit, Italian pastes, macaroni, vermicelli, semouille; paste in fancy forms for soups.

CLASS 207.—COMPOUND PORTABLE FOOD, MEAT AND VEGETABLE EXTRACTS.

a. Prepared army rations.

b. Extract of beef.

c. Extract of coffee.

CLASS 208.

CLASS 209.

## GROUP 21.

POTASH, SODA AND AMMONIA; SALT, BLEACHING-POWDERS, FERTILIZING COMPOUNDS, MINERAL ACIDS.

CLASS 210.—MINERAL ACIDS, AND THE METHODS OF MANUFACTURE. — Sulphuric, nitric and hydrochloric acids.

CLASS 211.—THE COMMON COMMERCIAL ALKALIES, POTASH, SODA AND AMMONIA, WITH THEIR CARBONATES.

CLASS 212.—SALT AND ITS PRODUCTION.—Salt from deposits—native salt. Salt by solar evaporation from sea-water. Salt by evaporation from water of saline springs or wells. Rock salt, ground and table salt.

CLASS 213.—BLEACHING POWDERS AND CHLORIDE OF LIME.

CLASS 214.—FERTILIZING COMPOUNDS MADE FROM BONES, GUANO, FISH, AND OTHER ORGANIC SOURCES.

CLASS 215.—FERTILIZING COMPOUNDS MADE FROM MINERAL PHOSPHATES, POTASH SALTS, AND OTHER MINERAL SOURCES. STASSFURTH COMPOUNDS.

CLASS 216.

CLASS 217.

CLASS 218.

CLASS 219.

GROUP 22.

OILS, SOAP, CANDLES, ILLUMINATING AND OTHER GASES.

CLASS 220.—OILS FROM MINERAL, ANIMAL AND VEGETABLE SOURCES.

a. Refined petroleum, benzine, naphtha, and other products of the manufacture.

b. Oils from various seeds, crude and refined, and of various degrees of purity. Olive-oil, cotton-seed oil, palm-oil.

c. Animal oils, of various kinds, in their refined state.

d. Oils prepared for special purposes besides lighting and for food. Lubricating oils.

CLASS 221.—SOAPS AND DETERGENT PREPARATIONS.

CLASS 222.—CANDLES, STEARINE, PARAFFINE, &c., SPERMACETI.

CLASS 223.—GLYCERINE.

CLASS 224.—ILLUMINATING GAS, AND ITS MANUFACTURE.

CLASS 225.—OXYGEN GAS, and its application for heating, lighting, metallurgy, and as a remedial agent.

CLASS 226.—CHLORINE AND CARBONIC ACID.

GROUP 23.

CHEMICAL AND PHARMACEUTICAL PREPARATIONS.

GROUP 24.

PAINTS, PIGMENTS, DYES, COLORS, TURPENTINES, OILS, VARNISHES, PRINTING-INKS, WRITING-INKS, BLACKING.

GROUP 25.

PATENT MEDICINAL COMPOUNDS, PERFUMERY, ESSENCES, POMADES, COSMETICS, AROMATIC VINEGARS, &c.

GROUP 26.

CEMENTS, ARTIFICIAL STONE, CONCRETE, BÉTON.

CLASS 260.—SPECIMENS OF LIME MORTAR AND MIXTURES, showing their hardness, strength, durability, &c, with illustrations of the processes of mixing, &c.

CLASS 261.—HYDRAULIC AND OTHER CEMENTS, as used, showing their strength and durability.

CLASS 262.—BÉTON MIXTURES AND RESULTS Coignet's béton and examples with illustrations of the processes.

CLASS 263.—ARTIFICIAL STONE for building purposes, building blocks, cornices, &c, (such, for example, as Ransome's, the Frear &c)

CLASS 264.—ARTIFICIAL STONE MIXTURES for pavements, walls, or ceilings.

CLASS 265.—PLASTERS, MASTICS, &c.

GROUP 27.

THE CERAMIC ART—TERRA COTTA, FAIENCE, PORCELAIN AND GLASS.

CLASS 270.—BRICKS, TERRA COTTA, and architectural pottery, &c.

CLASS 271.—FIRE-CLAY GOODS, CRUCIBLES, pots, furnaces, &c. Chemical stone-ware.

CLASS 272.—TILES.—Plain, enameled, encaustic and geometric tiles and mosaics. Tiles for pavements and for roofing, &c.

CLASS 273.—FAIENCE MAJOLICA, earthenware and household pottery.

CLASS 274.—PORCELAIN, for purposes of construction and ornament.

CLASS 275.—PORCELAIN-WARE, for table and household use.

CLASS 276.—GLASS used in construction and for mirrors.

a. Window-glass of various grades of quality and of size.

b. Plate-glass, hammered, and ground or polished.

CLASS 277.—CHEMICAL GLASS-WARE, bottles, &c.

CLASS 278.—TABLE AND DECORATIVE GLASS-WARE.

CLASS 279.

#### GROUP 28.

EXPLOSIVE AND FULMINATING COMPOUNDS. [*In small quantities only, under special regulations, or shown by empty cases and cartridges.*]

CLASS 280.—BLACK POWDER of various grades and sizes.

CLASS 281.—NITRO GLYCERINE and the methods of using and exploding.

CLASS 282.—GIANT POWDER, dynamite, dualin, &c.

#### GROUP 29.

### DEPARTMENT III.

TEXTILE AND FELTED FABRICS, APPAREL, COSTUMES, AND ORNAMENTS FOR THE PERSON.

#### GROUP 30.

YARNS AND WOVEN GOODS OF VEGETABLE OR MINERAL MATERIALS.

CLASS 300.—WOVEN FABRICS OF MINERAL ORIGIN.

a. Wire cloths, sieve-cloth, wire screens, bolting-cloth, &c., not manufactured.

b. Asbestos fiber, spun and woven, with the clothing manufactured from it.

c. Glass thread, floss, and fabrics.

CLASS 301.—COARSE FABRICS, of grass, rattan, cocoa-nut, bark, and aloe fiber.

a. Mattings of all kinds, Chinese, Japanese, palm-leaf, grass, and rushes.

b. Floor-cloths of rattan and cocoa-nut fiber.

CLASS 302.—COTTON YARNS AND FABRICS, bleached and unbleached, but not colored.

a. Cotton sheeting and shirting, plain and twilled.

b. Cotton canvas and duck.

CLASS 303.—DYED COTTON FABRICS exclusive of prints and calicoes.

CLASS 304.—COTTON PRINTS AND CALICOES, including handkerchiefs, shawls, scarfs, &c.

CLASS 305.—LINEN AND FINE GRASS FABRICS, UNCOLORED.

CLASS 306.—DYED LINEN FABRICS.

CLASS 307.

CLASS 308.

CLASS 309.—FLOOR OIL-CLOTHS, and other painted and enameled tissues, and imitations of leather, with a woven base.

GROUP 31.

WOVEN AND FELTED GOODS OF WOOL AND MIXTURES OF WOOL.

CLASS 310.—CARD-WOOL FABRICS.—Yarns, broadcloths, doeskins, fancy cassimeres.

CLASS 311.—FLANNELS.—Plain flannels, domets, opera and fancy.

CLASS 312.—BLANKETS, ROBES AND SHAWLS.

CLASS 313.—COMBED-WOOL FABRICS.—Worsted, yarns, dress-goods for women's wear; delaines, serges, poplins, merinoes.

CLASS 314.—CARPETS, RUGS, &c.—Brussels, Melton, tapestry, tapestry Brussels, Axminster, Venetian, ingrain, felted carpetings, druggets, rugs, &c.

CLASS 315.—HAIR, ALPACA, GOAT'S HAIR, CAMEL'S HAIR, and other fabrics, mixed or unmixed with wool.

CLASS 316.—PRINTED AND EMBOSSED WOOLEN CLOTHS, TABLE COVERS, PATENT VELVETS.

CLASS 317.

CLASS 318.

CLASS 319.

GROUP 32.

SILK AND SILK FABRICS AND MIXTURES IN WHICH SILK IS THE PREDOMINATING MATERIAL.

GROUP 33.

KNIT GOODS AND HOSIERY, INCLUDING UNDERWEAR MADE OF PIECE GOODS.

GROUP 34.

CLOTHING, READY-MADE CLOTHING, MILITARY CLOTHING, COSTUMES AND CLOTHING FOR SPECIAL OBJECTS.

GROUP 35.

HATS, CAPS, BOOTS AND SHOES, GLOVES, MITTENS, ETC., STRAW AND PALM LEAF HATS, BONNETS, AND MILLINERY.

GROUP 36.

LACES, EMBROIDERIES, AND TRIMMINGS FOR CLOTHING, FURNITURE, AND CARRIAGES.

GROUP 37.

FINE JEWELLERY, AND METALLIC OR MINERAL ORNAMENTS WORN UPON THE PERSON.

GROUP 38.

ORNAMENTS, ARTIFICIAL FLOWERS, COIFFURES, BUTTONS, TRIMMINGS, FANS, UMBRELLAS, SUN-SHADES, WALKING CANES, AND OTHER OBJECTS OF DRESS OR ADORNMENT, EXCLUSIVE OF JEWELRY.

GROUP 39.

PAPER, PASTEBOARD, CARD BOARD, WALL-PAPERS, PAPER BUILDING-MATERIAL  
AND FOR GENERAL CONSTRUCTION, AND PAPER INDUSTRY GENERALLY.

CLASS —.—Blank-books and stationery.

[See also Groups 70 and 71.]

S. Ex. 30.—23

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DEPARTEMENT IV.

FURNITURE AND MANUFACTURES OF GENERAL USE IN CONSTRUCTION AND  
IN DWELLINGS.

[See also Group 98.]

GROUP 40.

FURNITURE.—Chairs, tables, parlor and chamber suits, office and library  
furniture.

CLASS —.—Safes.

GROUP 41.

TABLE-FURNITURE.—Glass, china, silver, silver-plate, tea and coffee sets, urns,  
samovars, epergnes.

GROUP 42.

MIRRORS, STAINED AND ENAMELED GLASS, CUT AND ENGRAVED WINDOW-GLASS,  
AND OTHER DECORATIVE OBJECTS.

GROUP 43.

APPARATUS AND FIXTURES FOR HEATING, LIGHTING, VENTILATING AND  
COOKING.

GROUP 44.

HOUSEHOLD IMPLEMENTS, APPARATUS, AND ARTICLES USED IN DWELLINGS.

CLASS —.—Laundry appliances, washing-machines, mangles, clothes-wringers,  
clothes-bars, clothes lines, &c.

CLASS —.—Nursery.

CLASS —.—Kitchen and pantry.

CLASS —.—Cellar.

CLASS —.—Bath-room and water-closet.

CLASS —.—Library.

CLASS —.—Vestibule and hall furniture, rubber and cocoa mattings, shoe  
cleaners, umbrella-stands, &c.

CLASS —.—Lawn furniture, camp stools, rustic works, tents, awnings, ham-  
mocks, lunch baskets, &c.



GROUP 48.

MANUFACTURED PARTS OF DWELLINGS.

CLASS —.—Windows, sash and blind's, doors.

GROUP 49.

HARDWARE USED IN CONSTRUCTION, EXCLUSIVE OF TOOLS AND IMPLEMENTS.—

Spikes, nails, screws, tacks, bolts; locks, latches, bolts, hinges, pulleys: plumbers' and gas-fitters' hardware; furniture-fittings; ships' hardware and fittings.

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DEPARTEMENT V.

TOOLS, IMPLEMENTS, MACHINES AND PROCESSES.

GROUP 50.

MACHINES, TOOLS AND APPARATUS OF MINING, METALLURGY, CHEMISTRY AND THE EXTRACTIVE ARTS.

GROUP 51.

MACHINES, TOOLS AND APPARATUS OF AGRICULTURE, AND FORESTRY AND ALIMENTARY INDUSTRY.

GROUP 52.

MACHINES, TOOLS, AND APPLIANCES FOR WORKING WOOD, METALS OR STONE.  
CLASS —.—EMERY-PAPER, SAND-PAPER.

GROUP 53.

MACHINES AND IMPLEMENTS OF SPINNING, WEAVING, FELTING, PAPER-MAKING SEWING, AND MAKING CLOTHING AND ORNAMENTAL OBJECTS.

GROUP 54.

MACHINES AND APPARATUS FOR TYPE-MAKING, TYPE-SETTING, PRINTING, RULING, STAMPING, EMBOSsing, PRESSING, AND FOR MAKING BOOKS AND PAPER-WORKING.

CLASS 540.—PRINTING-PRESSES.

a. Hand-presses.

- b.* Steam-power presses.
- c.* Job-presses.
- d.* Hydraulic-presses.
- e.* Ticket-printing and numbering machines.
- CLASS 541. TYPE-CASTING MACHINES.
  - a.* Hand-casting moulds.
  - b.* Matrices.
  - c.* Printing blocks.
  - d.* Typographic electrotyping.
  - e.* Stereotyping.
- CLASS 542.—TYPES.
  - a.* Plain and ornamental types.
  - b.* Cuts, music, borders, electrotyped plates, &c.
  - c.* Specimen books of alphabets and typographical ornaments.
- CLASS 543.—PRINTERS FURNITURE.
  - a.* Cabinets.
  - b.* Composing-sticks.
  - c.* Cases.
  - d.* Brass and type-metal labor-saving appliances.
- CLASS 544.—TYPE SETTING MACHINES.
- CLASS 545.—BOOK-BINDING MACHINES.
- CLASS 546.—PAPER-FOLDING MACHINES.
- CLASS 547.—PAPER AND CARD CUTTING MACHINES.
- CLASS 548.—ENVELOPE-MACHINES.
- CLASS 549.—

GROUP 55.

MISCELLANEOUS HAND-TOOLS, MACHINES AND APPLIANCES USED IN VARIOUS ARTS, CUTLERY.

CLASS —.—Watch-making.

GROUP 56.

GROUP 57.

GROUP 58.

INSTRUMENTS AND APPARATUS OF MEDICINE AND SURGERY; OF RELIEF TO THE WOUNDED, SANITARY APPARATUS AND METHODS.

GROUP 59.

INSTRUMENTS AND APPARATUS FOR THE DESTRUCTION OF LIFE; FOR HUNTING, TRAPPING, FISHING.

- CLASS 590.—CUTTING INSTRUMENTS, KNIVES, SWORDS, SPEARS, DIRKS, &c.
- CLASS 591.—FIRE-ARMS FOR SPORTING AND HUNTING.

CLASS 592.—MILITARY SMALL-ARMS, MUSKETS, PISTOLS, AND MAGAZINE-GUNS, WITH THEIR AMMUNITION.

CLASS 593.—LIGHT ARTILLERY, COMPOUND GUNS, MACHINE GUNS, (MITRAILLEUSES,) &c.

CLASS 594.—HEAVY ORDNANCE AND ITS ACCESSORIES.

CLASS 595.—AMMUNITION, SHELLS, &c.

CLASS 596.

CLASS 597.

CLASS 598.

CLASS 599.—FISHING IMPLEMENTS.—Nets of all kinds, seines, lines, hooks, harpoons, spears, &c.; artificial baits, floats, sinkers, indicators, preserving substances for nets, tow, basket fishing apparatus; implements used in the artificial hatching of fish-eggs.

CLASS 599.—MODELS OF BASINS, BEDS, WATTLE FENCES, VASES, BOXES, AND OTHER APPARATUS USED IN FISH BREEDING, CULTURE, OR PRESERVATION; MODELS OF FISH-PENS, WEARS, &c.

## DEPARTEMENT VI.

### MOTORS AND TRANSPORTATION.

#### GROUP 60.

MOTORS AND APPARATUS FOR THE GENERATION AND TRANSMISSION OF POWER, AND FOR LIFTING AND MOVING FLUIDS.

CLASS 600.—BOILERS AND ALL STEAM OR GAS GENERATING APPARATUS FOR MOTIVE PURPOSES.

CLASS 601.—WATER-WHEELS, WATER-ENGINES, HYDRAULIC RAMS, WIND-MILLS.

CLASS 602.—STEAM AND AIR OR GAS ENGINES.

CLASS 603.—ELECTRO-MAGNETIC MOTOR ENGINES.

CLASS 604.—APPARATUS FOR THE TRANSMISSION OF POWER.—Shafting hangers, pulleys, couplings, gearing, friction-pulleys, clutches, &c.; belting, cables. Transmission of power by compressed air; mahovas.\*

CLASS 605.—PUMPS AND APPARATUS FOR LIFTING AND MOVING LIQUIDS.

- a. Ordinary lift and forcing pumps worked by hand.
- b. Lift and plunger pumps for mining, draining, elevating, and forcing.
- c. Rotary pumps, centrifugal pumps.
- d. Steam-pumps.
- e. Fire-engines.
- f. Steam or air injectors.

\* Contrivances for accumulation of power by means of fly-wheels.

g. Ejectors or steam siphon pumps.

h. Ejectors condensers.

CLASS 606.—PUMPS AND APPARATUS FOR MOVING AND COMPRESSING AIR OR GASES.—Piston air-pumps, for exhausting or for compressing air, rotary, air-pumps and blowers, ventilators, water stromels.

CLASS 607.—ICE-MACHINES.

CLASS 608.

CLASS 609.

GROUP 61.

VEHICLES AND APPARATUS OF TRANSPORTATION UPON COMMON ROADS, AND ACCESSORIES THERETO.

GROUP 62.

RAILWAYS AND RAILWAY PLANT.

GROUP 63.

RAILWAY ROLLING-STOCK AND APPARATUS.

GROUP 64.

HOISTING AND LIFTING APPARATUS.

GROUP 65.

TRANSPORTATION UPON SUSPENDED CABLES—AERIAL TRANSPORTATION, PNEUMATIC TRANSPORTATION.

GROUP 66.

BOATS AND SAILING-VESSELS FOR GENERAL PURPOSES.

GROUP 67.

STEAMSHIPS, STEAMBOATS, PROPELLERS, AND ALL VESSELS PROPELLED BY STEAM, OR OTHER FIXED MOTORS.

[See also GROUP 69.]

GROUP 68.

GROUP 69.

BOATS OR VESSELS DESIGNED FOR SPECIAL PURPOSES.

CLASS 690.—VESSELS FOR LAYING TELEGRAPH CABLES.

CLASS 691.—VESSELS FOR ARCTIC VOYAGES, FOR WHALING, &c.

CLASS 692.—LIFE-BOATS AND SALVAGE APPARATUS.

CLASS 693.—DREDGING BOATS AND BOATS FOR THE CONVEYANCE OF SAND AND REFUSE.

CLASS 694.—FOR TRANSPORTATION OF COAL OR ORES, FOR ICE, FOR WATER, OR OTHER BULKY SUBSTANCES OR OBJECTS.

CLASS 695.—FOR THE CONVEYANCE OF RAILWAY TRAINS, FREIGHT-CARS, &c.

CLASS 696.—FERRY-BOATS.

CLASS 697.—REFRIGERATING VESSELS for transportation of fresh meats and fruits.

CLASS 698.—SHIPS OF WAR.

*a.* Wooden ships.

*b.* Iron-clad batteries (floating).

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## DEPARTMENT VII.

APPARATUS AND METHODS FOR THE INCREASE AND DIFFUSION OF KNOWLEDGE.

### GROUP 70.

EDUCATIONAL APPARATUS AND METHODS.

CLASS 700.—OBJECTS FOR THE INSTRUCTION AND AMUSEMENT OF THE YOUNG.

CLASS 701.—SCHOOL FURNITURE AND FITTINGS.

CLASS 702.—SCHOOL APPARATUS, for experiment and illustration.

CLASS 703.—TABULAR GRAPHIC REPRESENTATIONS, wall maps, charts, &c.

CLASS 704.—MODELS, RELIEF-MAPS.

CLASS 705.—DRAWING-BOOKS, and instruments and systems of instruction in drawing.

CLASS 706.—WRITING-BOOKS, and systems of instruction in writing.

CLASS 707.—MODELS, CASTS AND CARVINGS, serving as objects for free-hand drawing.

CLASS 708.—COURSES AND METHODS OF EXAMINATION.

CLASS 709.—SCHOOL-DISCIPLINE AND MILITARY TRAINING IN SCHOOLS. Sanitary regulations of school-buildings.

### GROUP 71.

TYPOGRAPHIC AIDS TO THE PRESERVATION AND DISSEMINATION OF

KNOWLEDGE.

CLASS 710.—SCHOOL AND TEXT BOOKS.

CLASS 711.—DICTIONARIES, ENCYCLOPEDIAS, GAZETTEERS, DIRECTORIES; INDEX-VOLUMES, BIBLIOGRAPHIES, CATALOGUES, ALMANACS.

CLASS 712.—SPECIAL TREATISES.



- CLASS 713.—GENERAL AND MISCELLANEOUS LITERATURE.
- CLASS 714.—NEWSPAPERS.
- CLASS 715.—TECHNICAL AND SPECIAL NEWSPAPERS AND JOURNALS.
- CLASS 716.—ILLUSTRATED PAPERS.
- CLASS 717.—PERIODICAL LITERATURE.
- CLASS 718.
- CLASS 719.—WORKS OF IMAGINATION AND FANCY.

GROUP 72.

CHARTS, MAPS, AND GRAPHIC REPRESENTATIONS.

- CLASS 720.—TOPOGRAPHICAL MAPS.
- CLASS 721.—MARINE AND COAST CHARTS, profiles of ocean-bed between specified points.
- CLASS 722.—GEOLOGICAL MAPS AND SECTIONS.
- CLASS 723.—BOTANICAL, AGRONOMICAL, AND OTHER MAPS, showing the extent and distribution of men, animals and terrestrial products. Physical maps.
- CLASS 724.—METEOROLOGICAL MAPS AND BULLETINS, MAGNETICAL MAPS, and other graphic representations.
- CLASS 725.—TELEGRAPHIC ROUTES AND STATIONS, courses of submarine-cables, &c.
- CLASS 726.—RAILWAY AND ROUTE MAPS.
- CLASS 727.—TERRESTRIAL AND CELESTIAL GLOBES.
- CLASS 728.—RELIEF MAPS AND MODELS OF PORTIONS OF THE EARTH'S SURFACE.
- CLASS 729.—MAPS AND SECTIONS OF MINES. Section-models of geological formations and of mines and mineral deposits.

GROUP 73.

TELEGRAPHIC INSTRUMENTS AND METHODS.

- CLASS 730.—BATTERIES AND FORMS OF APPARATUS USED IN GENERATING THE ELECTRICAL CURRENTS FOR TELEGRAPHIC PURPOSES.
- CLASS 731.—CONDUCTORS AND INSULATORS, AND METHODS OF SUPPORT. Marine Telegraph-cables.
- CLASS 732.—APPARATUS OF TRANSMISSION.—Keys, office accessories, and apparatus.
- CLASS 733.—RECEIVING INSTRUMENTS, RELAY MAGNETS, LOCAL CIRCUITS, &c.
- CLASS 734.—SEMAPHORIC AND RECORDING INSTRUMENTS.
- CLASS 735.—CODES, SIGNS, OR SIGNALS.
- CLASS 736.—PRINTING TELEGRAPHS FOR SPECIAL USES.
- CLASS 737.—ELECTROGRAPHS.
- CLASS 738.—DIAL OR CADRAN SYSTEMS.
- CLASS 739.—APPARATUS FOR AUTOMATIC TRANSMISSION.

GROUP 74.

INSTRUMENTS OF PRECISION, AND APPARATUS OF PHYSICAL RESEARCH, EXPERIMENT AND ILLUSTRATION.

- CLASS 740.—ASTRONOMICAL INSTRUMENTS AND ACCESSORIES, USED IN OBSERVATIONS.—Transits, transit-circles, mural-circles, zenith-sectors, altazimeters, equatorials, collimators, comet-seekers, vertical circles, extrameridional transits, prime vertical transits, zenith-telescopes, reflex zenith-sectors, sextants, quadrants, repeating-circles, dip-sectors, &c.

CLASS 740 $\frac{1}{2}$ .—GEODETIC AND SURVEYING INSTRUMENTS.—Transits, theodolites, sextants and artificial horizons, needle compasses, goniometers. Instruments for surveying underground in mines, tunnels, and excavations. Pocket sextants. Plane tables, and instruments used with them, engineers' levels, leveling staves, targets, and accessory apparatus.

CLASS 741.—LEVELING INSTRUMENTS AND APPARATUS.—Carpenters' and builders' levels, hand-levels, water-levels, of all patterns and varieties.

CLASS 741 $\frac{1}{2}$ .—HYDROGRAPHIC SURVEYING, DEEP-SEA SOUNDING; electrical sounding apparatus; deep-sea thermometers; current-meters.

CLASS 742.—PHOTOMETRIC APPARATUS AND METHODS.

CLASS 742 $\frac{1}{2}$ .—MECHANICS IN GENERAL.

CLASS 743.—ACOUSTICS.

CLASS 743 $\frac{1}{2}$ .—OPTICS, spectroscopes, polarimeters, &c.

CLASS 744.—ELECTRICITY AND MAGNETISM.

CLASS 744 $\frac{1}{2}$ .—MATHEMATICAL APPARATUS AND ILLUSTRATIONS.

CLASS 745.—TIDES, EARTHQUAKES, &c.

CLASS 745 $\frac{1}{2}$ .—TERRESTRIAL MAGNETISM.

CLASS 746.—THERMATEICS.

CLASS 746 $\frac{1}{2}$ .—STRENGTH OF MATERIALS.

CLASS 747.—EXPLOSIVE POWER OF GUN-COTTON, &c.

#### GROUP 75.

##### METEOROLOGICAL INSTRUMENTS AND APPARATUS.

CLASS 750.—THERMOMETERS.—Mercurial, spirit, air; ordinary or self-registering, maximum and minimum. Pyrometers, chronometric thermometers, black-bulb radiation thermometers. [See also Class 744.]

CLASS 750 $\frac{1}{2}$ .—BAROMETERS, mercurial and aneroid; ordinary and self-registering.

CLASS 751.—ANEMOMETERS and anemoscopes; ordinary and self-registering.

CLASS 751 $\frac{1}{2}$ .—HYGROSCOPES, psychrometers.

CLASS 752.—RAIN-GAUGES, ordinary and self-registering.

CLASS 753.—EVAPOMETERS.

CLASS 753 $\frac{1}{2}$ .—APPARATUS FOR OBSERVING ATMOSPHERIC ELECTRICITY.

CLASS 754.—OZONOMETERS.

CLASS 754 $\frac{1}{2}$ .—APPARATUS FOR DETERMINING THE DISTANCE, ALTITUDE, AND DIRECTION OF CLOUDS, AURORAS, &c.

CLASS 755.—OCTINOMETERS, chemical.

CLASS 755 $\frac{1}{2}$ .—CYANOMETERS.

CLASS 756.—METEOROGRAPHS.—Combined self-registering apparatus.

CLASS 756 $\frac{1}{2}$ .—BLANKS FOR RECORDING OBSERVATIONS.—Methods of recording, reducing and reporting observations.

#### GROUP 76.

##### MECHANICAL CALCULATION; INDICATING AND REGISTERING APPARATUS, OTHER THAN METEOROLOGICAL.

CLASS 760.—COUNTING MACHINES, CALCULATING ENGINES, ARITHMOMETERS.

CLASS 761.—PLANIMETRY.

CLASS 762.—APPARATUS FOR PRINTING CONSECUTIVE NUMBERS.

CLASS 763.—REGISTERS OF REVOLUTION OF PARTS OF MACHINERY.—Viameters or instruments for recording the number of revolutions of wagon-wheels upon roads; pedometers, perambulators.

CLASS 764.—GAS-METERS.

CLASS 765.—WATER-METERS, CURRENT-METERS, SHIPS' LOGS, ELECTRICAL LOGS.

CLASS 766.—MANOMETERS—Steam gauges, dynamometers, and apparatus for indicating pressure.

CLASS 767.—TIDE REGISTERS.

GROUP 77.

WEIGHTS, MEASURES, AND COINS; WEIGHING AND METROLOGICAL APPARATUS.

CLASS 770.—MEASURES OF LENGTH—Graduated scales on wood, metal, ivory, tape, or ribbon; steel tapes, chains, rods, comparators, cathetometers.

CLASS 771.—MEASURES OF CAPACITY—SOLIDS.

CLASS 772.—MEASURES OF CAPACITY—LIQUIDS.

CLASS 773.—WEIGHTS.

CLASS 774.—SCALES AND GRADUATED BEAMS      WEIGHING.

a. Assay balances.

b. Chemical balances.

c. Ordinary scales for commercial transactions.

d. Platform scales for heavy weights; weighing locomotives and trains of cars.

e. Postal balances.

CLASS 775.—Hydrometers, alcoholometers, lactometers, &c.; gravimeters.

CLASS 776.—RODS AND GRADUATED SCALES for measuring lumber, goods in packages, casks, &c.; gaugers' tools and methods.

CLASS 777.—COINS AND COINING.

CLASS 778.—COLLECTIONS TO ILLUSTRATE IMPORTANCE OF SECURING INTERNATIONAL UNIFORMITY IN WEIGHTS, MEASURES, AND COINS.

GROUP 78.

CHRONOMETRIC APPARATUS—TIME MEASURES OF ALL KINDS.

CLASS 780.—ASTRONOMICAL AND OTHER ACCURATE CHRONOMETERS; WATCHES.

CLASS 781.—WATCHES.

CLASS 782.—ASTRONOMICAL CLOCKS.

CLASS 783.—CHURCH AND METROPOLITAN AND ORDINARY CLOCKS.

CLASS 784.—CLEPSYDRAS, HOUR-GLASSES, SUN-DIALS.

CLASS 785.—CHRONOGRAPHS.

CLASS 786.—METRONOMES.

CLASS 787.—CLOCKS CONTROLLED, DRIVEN, OR REGULATED BY ELECTRICITY.

GROUP 79.

MUSICAL INSTRUMENTS AND ACOUSTIC APPARATUS.

CLASS 790.—PERCUSSION INSTRUMENTS, such as drums, tambourines, cymbals, triangles, bells.

CLASS 791.—PIANOS.

CLASS 792.—STRINGED INSTRUMENTS others than pianos.

CLASS 793.—AUTOMATIC MUSICAL INSTRUMENTS, MUSIC-BOXES, &c.

CLASS 794.—WIND INSTRUMENTS of metal and of wood.

CLASS 795.—HARMONIUMS.

CLASS 796.—CHURCH ORGANS and other similar instruments.

CLASS 797.—SPEAKING-MACHINES.

CLASS 798.—VOCAL MUSIC.

## DEPARTMENT VIII.

ENGINEERING, PUBLIC WORKS, ARCHITECTURE, ETC.

### GROUP 80.

#### AGRICULTURAL ENGINEERING.

CLASS 800.—LAYING OUT FARMS, CONSTRUCTION OF ROADS, draining, irrigating, and construction of farm buildings.

CLASS 801.—PREPARATION OF THE GROUND, AND PLANTING.

CLASS 802.—CULTIVATION, &c.

CLASS 803.—HARVESTING.

CLASS 804.—CLEANING, PREPARING, PACKING, AND PRESERVATION OF CROPS.

CLASS 805.—Farm transportation.

CLASS 806.—TREATMENT OF THE SOIL.—Improvement, preservation, restoration, and increase of its productive capacity. Use of fertilizers..

CLASS 807.—REARING, CARE, and management of stock.

CLASS 808.

CLASS 809.—FARM SUPERINTENDENCE AND MANAGEMENT.

### GROUP 81.

#### MINING ENGINEERING.

CLASS 810.—SURFACE AND UNDERGROUND SURVEYING AND PLOTTING.—Projection of underground work, location of shafts, tunnels, &c., surveys for aqueducts and for drainage.

CLASS 811.—BORING AND DRILLING ROCKS, SHAFTS AND TUNNELS.—Borings for water, oil, or other substances, and for ascertaining the nature and extent of mineral deposits.

CLASS 812.—CONSTRUCTION, SINKING, AND LINING SHAFTS, by various methods; driving and timbering tunnels, and the general operations of opening, stoping, and breaking down ore; timbering, logging, and masonry.

CLASS 813.—HOISTING AND DELIVERING AT THE SURFACE, ROCK, ORE, OR MINERS.

CLASS 814.—PUMPING AND DRAINING by engines, buckets, or by adits.

CLASS 815.—VENTILATION, LIGHTING, &c.

CLASS 816.—SUBAQUEOUS MINING, BLASTING, &c.

CLASS 817.—HYDRAULIC MINING, and the various processes and methods of sluicing and washing auriferous gravels, and other superficial deposits.

CLASS 818.—QUARRYING.

### GROUP 82.

#### CIVIL ENGINEERING.

CLASS 820.—CONSTRUCTION AND MAINTENANCE of roads, street pavements, &c.

CLASS 821.—SURVEYS AND LOCATION of towns and cities with systems of water supply and drainage.

CLASS 822.—BRIDGES OF STONE, BRICK, OR BETON.

CLASS 823.—IRON AND STEEL BRIDGES.

CLASS 824.—SUSPENSION BRIDGES.

CLASS 825.—CANALS, AQUEDUCTS, RESERVOIRS, construction of dams, &c.  
Hydraulic engineering, and means for arresting and controlling flow of water;  
water supply.

GROUP 83.

DYNAMIC AND INDUSTRIAL ENGINEERING.

GROUP 84.

RAILWAY ENGINEERING.

GROUP 85.

PUBLIC WORKS AND ARCHITECTURE.

GROUP 86.

GROUP 87.

SUBMARINE CONSTRUCTIONS, FOUNDATIONS, PIERS, DOCKS, ETC.

GROUP 88.

MILITARY ENGINEERING.

GROUP 89.

NAVAL ENGINEERING.

## DEPARTEMENT IX.

PLASTIC AND GRAPHIC ARTS.

GROUP 90.

SCULPTURE.

GROUP 91.

PAINTING.

GROUP 92.

LINE-DRAWING, ENGRAVING, AND DIE-SINKING.

GROUP 93.

CHROMO-LITHOGRAPHY AND LITHOGRAPHY.

GROUP 94.

PHOTOGRAPHY.

CLASS 940.—LANDSCAPE PHOTOGRAPHS.

CLASS 941.—ARCHITECTURAL.

CLASS 942.—FROM ANIMATE OBJECTS—PORTRAITS.

CLASS 943.—PHOTO-RELIEF PLATES — ALBERTYPES, WOODBURYTYPES,  
HELIOTYPES, &c.

CLASS 994.—REPRODUCTION OF ENGRAVINGS, PAINTINGS, DESIGNS AND  
DRAWINGS.

CLASS 945.—BAS-RELIEF, METAL ORNAMENTS, SHELLS, AND SMALL OBJECTS  
IN RELIEF, particularly of fossils and "natural history" specimens.

CLASS 946.—PHOTO-LITHOGRAPHIC, PHOTO ZINCOGRAPHIC PROCESSES, &c.

CLASS 947.—ON PORCELAIN, IVORY, METAL, LEATHER, OR OTHER POLISH-  
ED SURFACES.



CLASS 948.—NEGATIVES ON GLASS FOR STEREOSCOPES; NEGATIVES BY DRY-PLATE PROCESS.

GROUP 95.

INDUSTRIAL DESIGNS.

GROUP 96.

MOSAIC AND INLAID WORK.

GROUP 97.

ARCHITECTURAL DESIGNS AND MODELS.

CLASS 970.—ECCLESIASTICAL.

CLASS 971.—PUBLIC BUILDINGS.

CLASS 972.—CITY RESIDENCES.

CLASS 973.—COUNTRY OR SEA-SIDE RESIDENCES.

CLASS 974.—FARM-HOUSES AND OUTBUILDINGS.

CLASS 975.—EXTERIOR AND INTERIOR DECORATION, DETAILS OF.

GROUP 98.

DECORATION AND FURNISHING OF INTERIORS OF PUBLIC AND PRIVATE BUILDINGS.

[This group is designed to include special exhibitions of harmonious combinations of objects included under various groups and classes.]

GROUP 99.

LANDSCAPE GARDENING.

CLASS 990.—LOCATION OF ROADS, BUILDINGS AND PLANTS, AND MODIFICATIONS OF THE SURFACE.

CLASS 991.—CONSTRUCTION AND GRADING OF ROADWAYS AND PATHS.

CLASS 992.—TREE AND SHRUB GROUPING.

CLASS 993.—TREATMENT OF GRASS AND LAWNS.

CLASS 994.—DESIGNS FOR FLOWER PLANTING, PLANT-GROUPING, &c.

CLASS 995.—MANAGEMENT OF WATER-DRAINAGE, &c.—Rivulets, rivers, water-supply of gardens and lawns, cascades, fountains, reservoirs and lakes.

CLASS 996.—RUSTIC CONSTRUCTIONS AND ADORNMENTS.

CLASS 997.—ROCK WORK AND FERNERIES.

CLASS 998.—HEDGES, TRIMMED PLANTS, SUBSTITUTES FOR FENCES, &c.

DEPARTEMENT X.

SYSTEMS, OBJECTS, AND APPARATUS ILLUSTRATING EFFORTS FOR THE IMPROVEMENT OF THE PHYSICAL, INTELLECTUAL, AND MORAL CONDITION OF MAN.

GROUP 100.

PHYSICAL DEVELOPMENT AND CONDITION.

CLASS 1000.—THE NURSERY AND ITS ACCESSORIES.

CLASS 1001.—GYMNASIUMS, GAMES, AND MANLY SPORTS.—Skating, walking, climbing, ball-playing, wrestling, acrobatic exercises; rowing, hunting, &c.

CLASS 1002.—ALIMENTATION.—Markets; preparation and distribution of food.

CLASS 1003.—THE DWELLING, with its sanitary conditions and regulations.

- a. Dwellings for mechanics and working-men.
  - b. Dwellings for farmers and farm laborers.
  - c. Dwellings characterized by cheapness, combined with the conditions essential to health and comfort.
  - d. Tenement houses.
  - e. "Flats" and suites of apartments.
- CLASS 1004.—HOTELS, RESTAURANTS, LODGING-HOUSES.
- CLASS 1005.—PUBLIC BATHS AND LAVATORIES.

GROUP 101.

SANITARY.

- CLASS 1010.—MEDICINE AND SURGERY.
- CLASS 1011.—RELIEF TO THE WOUNDED.—Sanitary commissions and their work; Medical and Surgical History of the War.
- CLASS 1012.—GENERAL HOSPITALS.
- CLASS 1013.—HOSPITALS FOR CONTAGIOUS AND INFECTIOUS DISEASES.
- CLASS 1014.—HOSPITALS FOR THE INSANE.
- a. Under state control, and
  - b. Private asylums.
- CLASS 1015.—QUARANTINE SYSTEM AND ORGANIZATION.
- CLASS 1016.—SANITARY LAWS AND REGULATIONS OF CITIES.
- a. Desinfection.
  - b. Ventilation.
  - c. Removal of offal and refuse.
  - d. Organization and work of health boards.
  - e. Cemeteries.
- CLASS 1017.—ASYLUMS.

GROUP 102.

BENEVOLENCE.

- CLASS 1020.—TREATMENT OF PAUPERS.—Alms-houses, feeding the poor, lodging-houses.
- CLASS 1021.—ASYLUMS FOR INFANTS AND CHILDREN.—Foundling and orphan asylums, children's aid societies, &c.
- CLASS 1022.—HOMES FOR THE AGED AND INFIRM.—Homes for aged men and women; soldiers' homes; homes for the maimed and deformed; sailor's homes.
- CLASS 1023.—EMIGRANT AID SOCIETIES.
- CLASS 1024.—HOMES FOR THE DEFORMED AND ABNORMALLY DEVELOPED.
- CLASS 1025.—TREATMENT OF ABORIGINES.
- CLASS 1026.—PREVENTION OF CRUELTY TO ANIMALS.

GROUP 103.

GOVERNMENT AND LAW.

- CLASS 1030.—VARIOUS FORMS OF GOVERNMENT.
- CLASS 1031.—DEPARTMENTS OF GOVERNMENT.
- a. Revenue and taxation.
  - b. Military and naval methods of defense.
  - c. Executive powers.
  - d. Legislative forms and authority.
  - e. Judicial functions and systems.

f. Police regulations; government charities.  
g. International relations; international law; diplomatic and consular service, &c.

h. Allegiance and citizenship; naturalization.

CLASS 1032.—MUNICIPAL GOVERNMENT.

CLASS 1033.—PROTECTION OF PROPERTY IN INVENTIONS.

CLASS 1034.—POSTAL SYSTEMS AND APPLIANCES.

CLASS 1035.—PUNISHMENT OF CRIME.

a. Prisons and prison management and discipline.

b. Transportation of criminals; penal colonies.

c. Houses of correction; reform schools.

d. Naval or marine discipline; punishment at sea.

#### GROUP 104.

##### RELIGIOUS ORGANIZATION AND SYSTEMS.

CLASS 1040.—ORIGIN, NATURE, GROWTH AND EXTENT OF VARIOUS RELIGIOUS SYSTEMS AND SECTS.—Statistical, historical and other facts.

CLASS 1041.—RELIGIOUS ORDERS AND SOCIETIES, AND THEIR OBJECTS.

CLASS 1042.—SOCIETIES AND ORGANIZATIONS FOR THE PROPAGATION OF SYSTEMS OF RELIGION, BY MISSIONARY EFFORT.—Their extent, conduct, and statistics of their operations.

CLASS 1043.—SPREADING THE KNOWLEDGE OF RELIGIOUS SYSTEMS BY PUBLICATIONS.—Specimens of the publications of the Bible societies, Tract Society, American Sunday-School Union; their statistics.

CLASS 1044.—SYSTEMS AND METHODS OF RELIGIOUS INSTRUCTION AND TRAINING FOR THE YOUNG.—Teachings in the family. Sunday-school furniture and apparatus.

#### GROUP 105.

##### EDUCATION.

CLASS 1050.—PRIMARY EDUCATION.—Infant schools.

CLASS 1051.—PUBLIC-SCHOOL SYSTEMS.

CLASS 1052.—SPECIAL SCHOOLS OF SCIENCE, LAW, MEDICINE, AND THEOLOGY.

CLASS 1053.—UNIVERSITY EDUCATION.

CLASS 1054.—TECHNICAL EDUCATION.—Institutes of technology.

CLASS 1055.—ART SCHOOLS, CLASSES, AND INSTRUCTION.

CLASS 1056.—INSTRUCTION BY LECTURES.

CLASS 1057.—LIBRARIES.

CLASS 1058.—EDUCATION OF THE ABNORMALLY DEVELOPED.

CLASS 1059.—GOVERNMENT AID TO THE CAUSE OF EDUCATION.—Mechanic arts and agricultural colleges.

#### GROUP 106.

##### INSTITUTIONS, SOCIETIES AND ORGANIZATIONS HAVING FOR THEIR OBJECT THE PROMOTION OF SCIENCE.

CLASS 1060.—CHEMICAL AND PHYSICAL.

CLASS 1061.—ASTRONOMICAL SOCIETIES AND ASTRONOMICAL OBSERVATORIES.

CLASS 1062.—GEOLOGICAL AND MINERALOGICAL SOCIETIES.

CLASS 1063.—BIOLOGICAL, ZOOLOGICAL, MEDICAL, &c.

CLASS 1064.—PHILOLOGICAL.

CLASS 1065.—ETHNOLOGICAL AND SOCIOLOGICAL.

CLASS 1066.—ARCHEOLOGICAL AND HISTORICAL.

CLASS 1067.—ENGINEERING AND TECHNICAL.

CLASS 1068.—COLLECTIONS AND MUSEUMS ILLUSTRATING THE PROGRESS OF SCIENCE.

CLASS 1069.—INSTITUTIONS AND ASSOCIATIONS, FOUNDED FOR THE INCREASE AND DIFFUSION OF KNOWLEDGE, such as the Smithsonian Institution, the Royal Institution, the Institute of France, British Association for the Advancement of Science, the Franklin Institute, Academy of Natural Science, and the American Association, &c—their organization, history and results.

GROUP 107.

COOPERATIVE COMMERCIAL AND FINANCIAL INSURANCE ASSOCIATIONS.

CLASS 1070.—POLITICAL SOCIETIES AND ORGANIZATIONS.

CLASS 1071.—WORKINGMEN'S UNIONS AND ASSOCIATIONS.—Their organizations, statistics and results.

CLASS 1072.—INDUSTRIAL ORGANIZATIONS, such as the Iron and Steel Association the American Woolen Manufacturers' Association, &c.

CLASS 1073.—INTERNATIONAL CONGRESSES FOR VARIOUS PURPOSES.

CLASS 1074.—SECRET SOCIETIES.

CLASS 1075.—MISCELLANEOUS ORGANIZATIONS for promoting the material and moral well-being of the industrial classes.

CLASS 1076.—BANKING.

CLASS 1077.—INSURANCE.

a. Insurance of person.

b. Insurance of property.

GROUP 108.

MUSIC AND THE DRAMA.

GROUP 109.

EXHIBITION OF WORKS OF ART AND INDUSTRY.

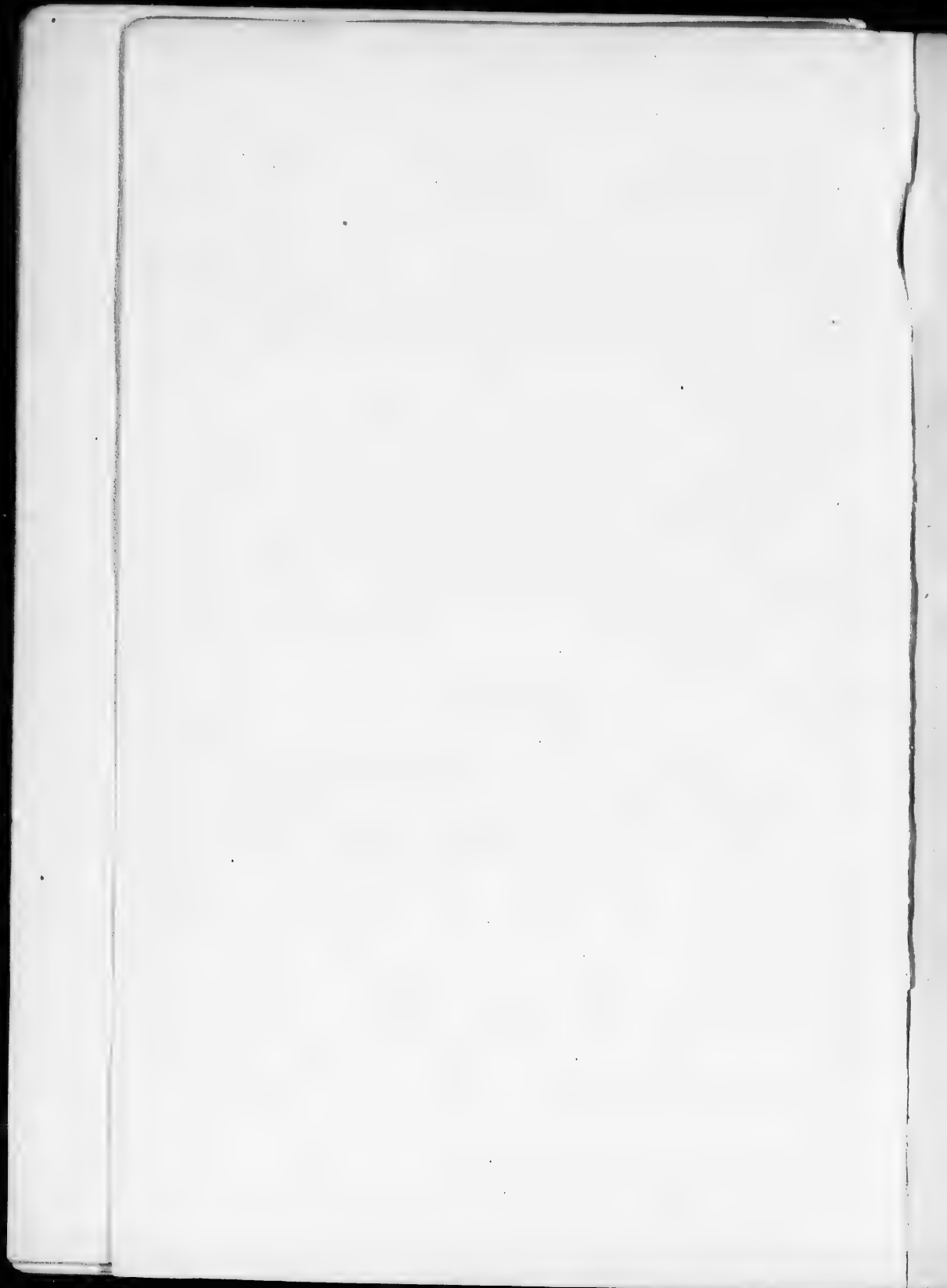
CLASS 1090.—AGRICULTURAL FAIRS; State and county exhibitions.

CLASS 1091.—NATIONAL EXHIBITIONS.

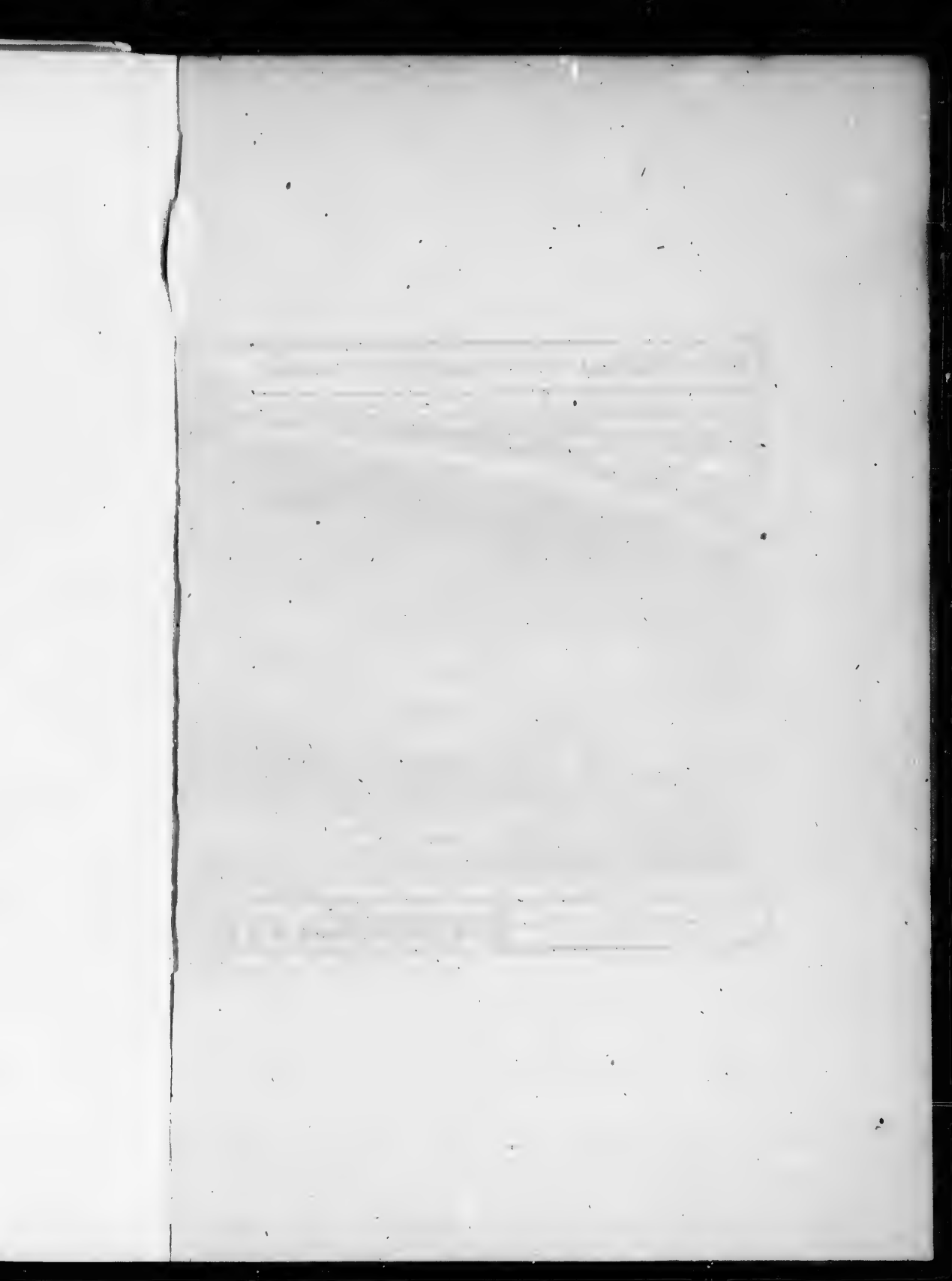
CLASS 1092.—ART MUSEUMS AND COLLECTIONS.

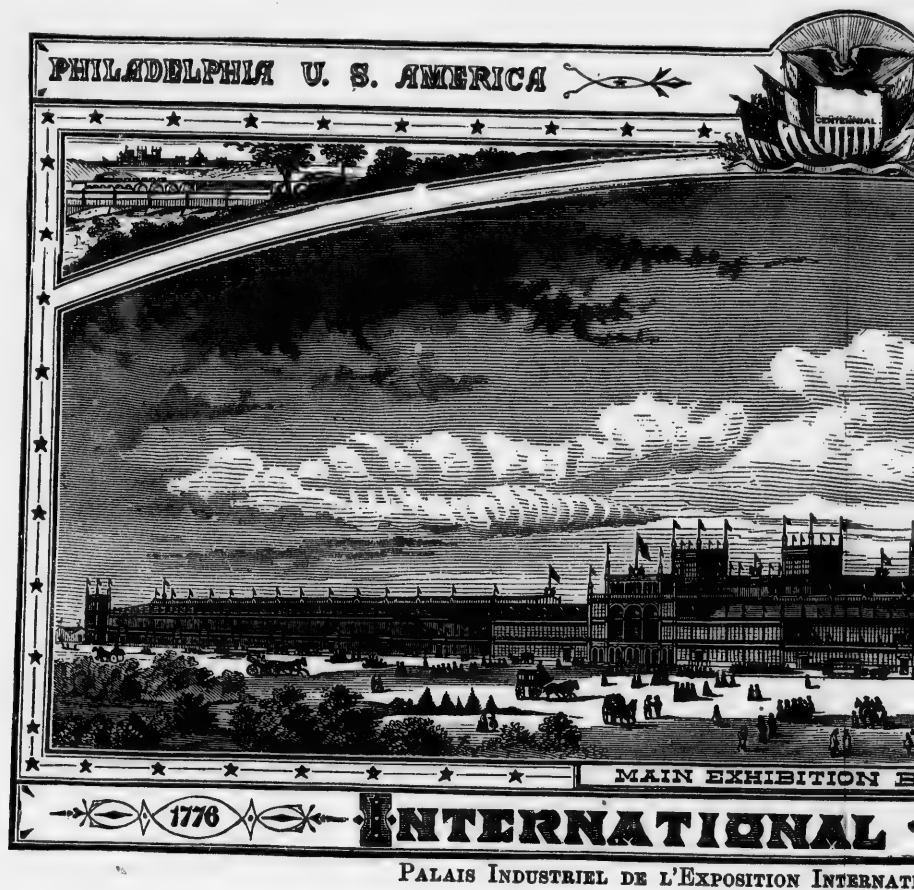
CLASS 1093.—MUSEUMS OF INVENTIONS AND OF ART applied to industry.

CLASS 1094.—INTERNATIONAL EXHIBITIONS.

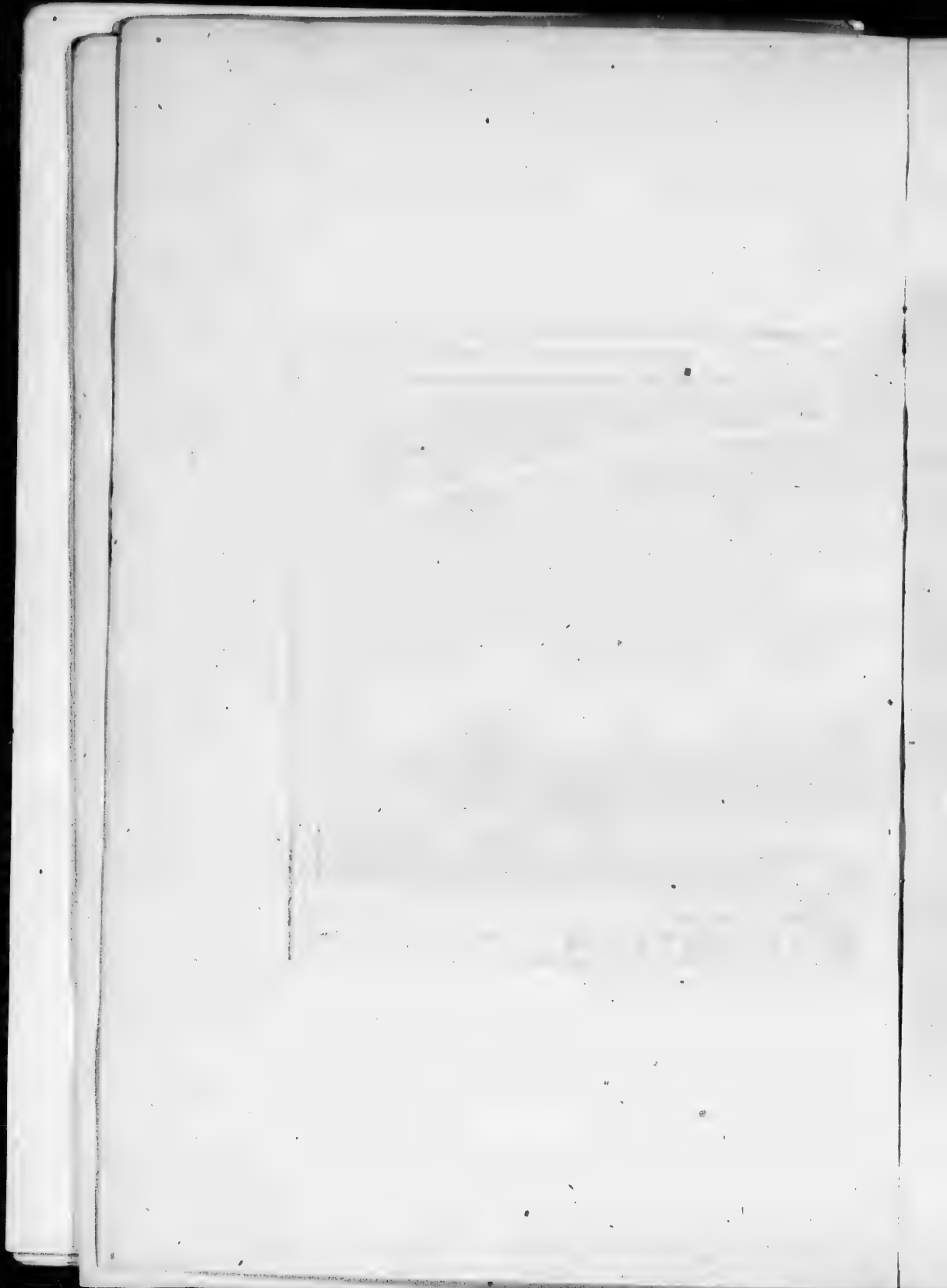


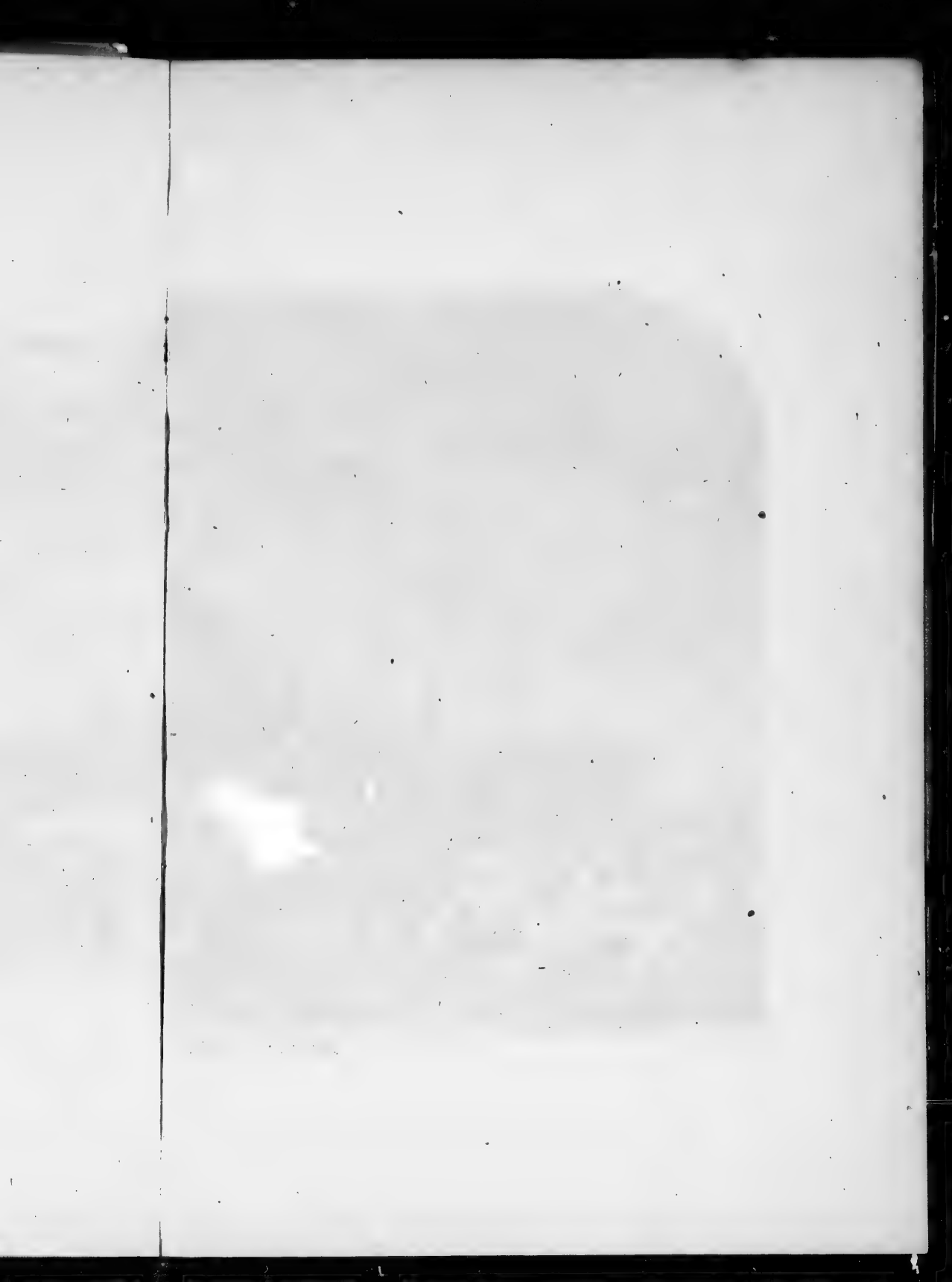


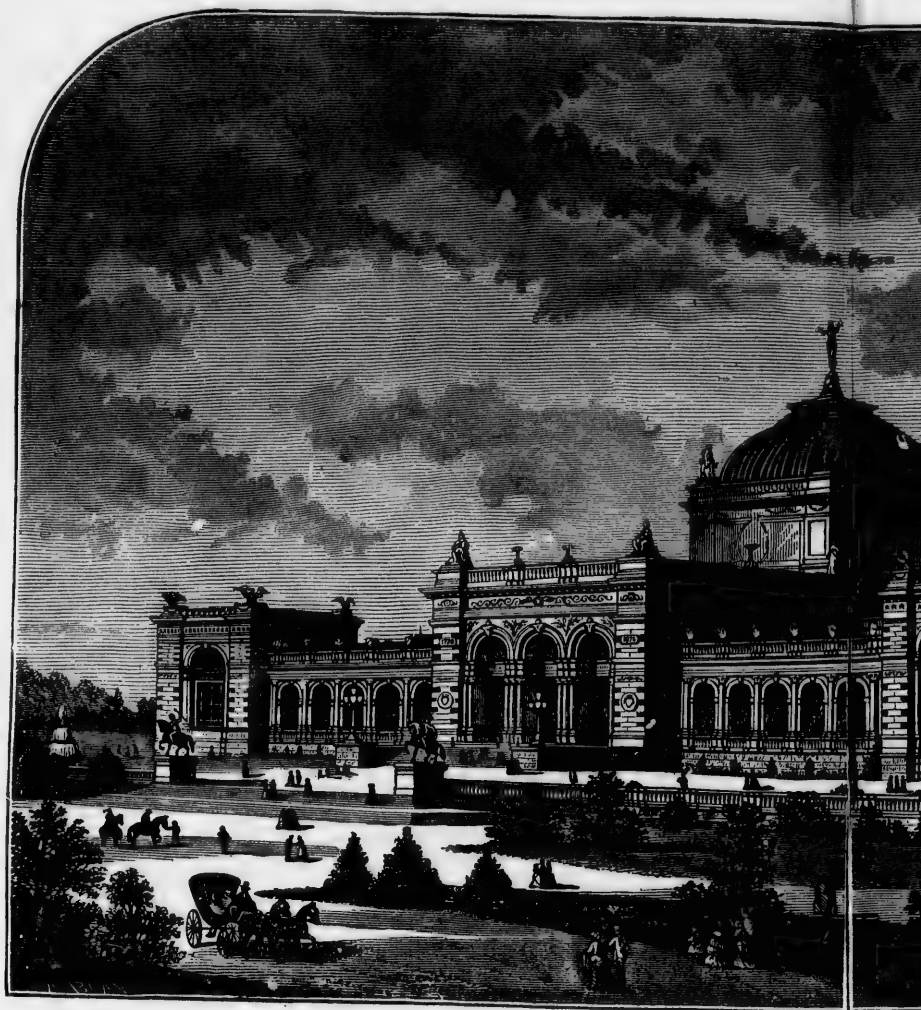




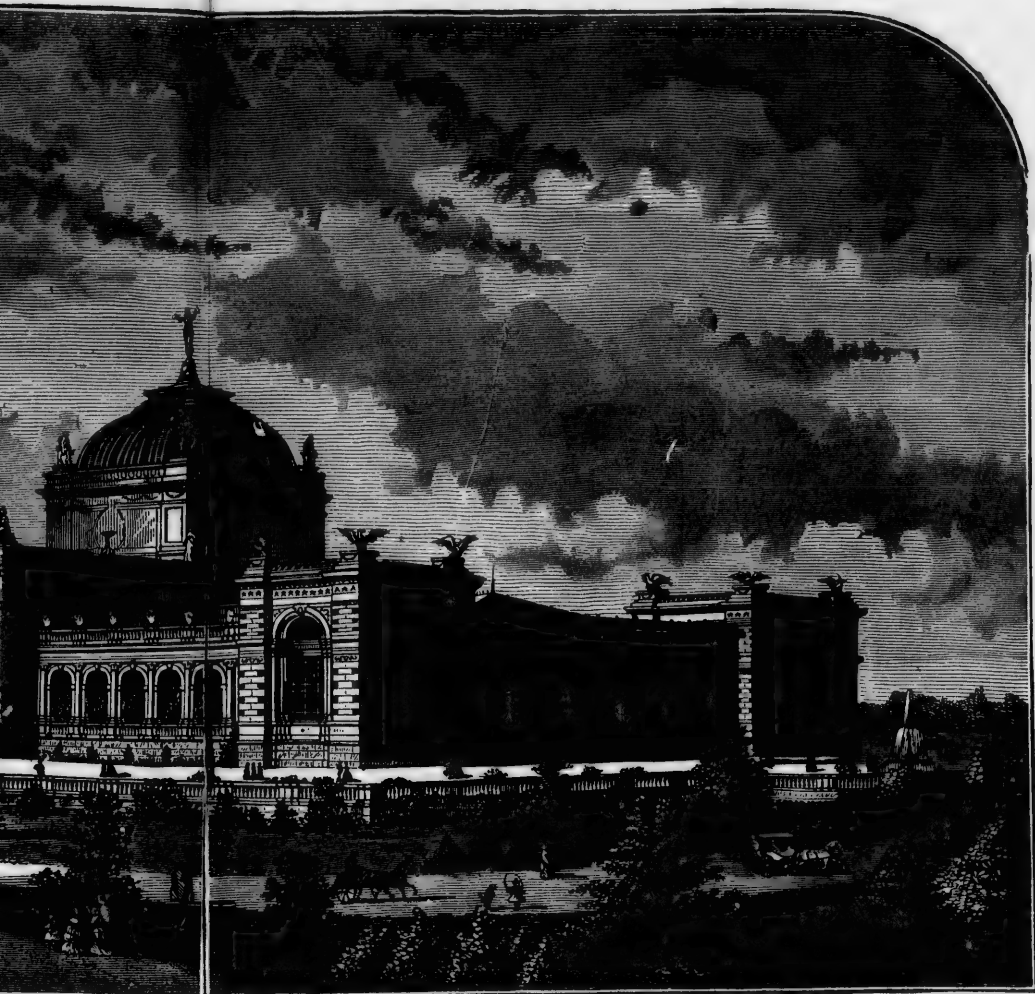






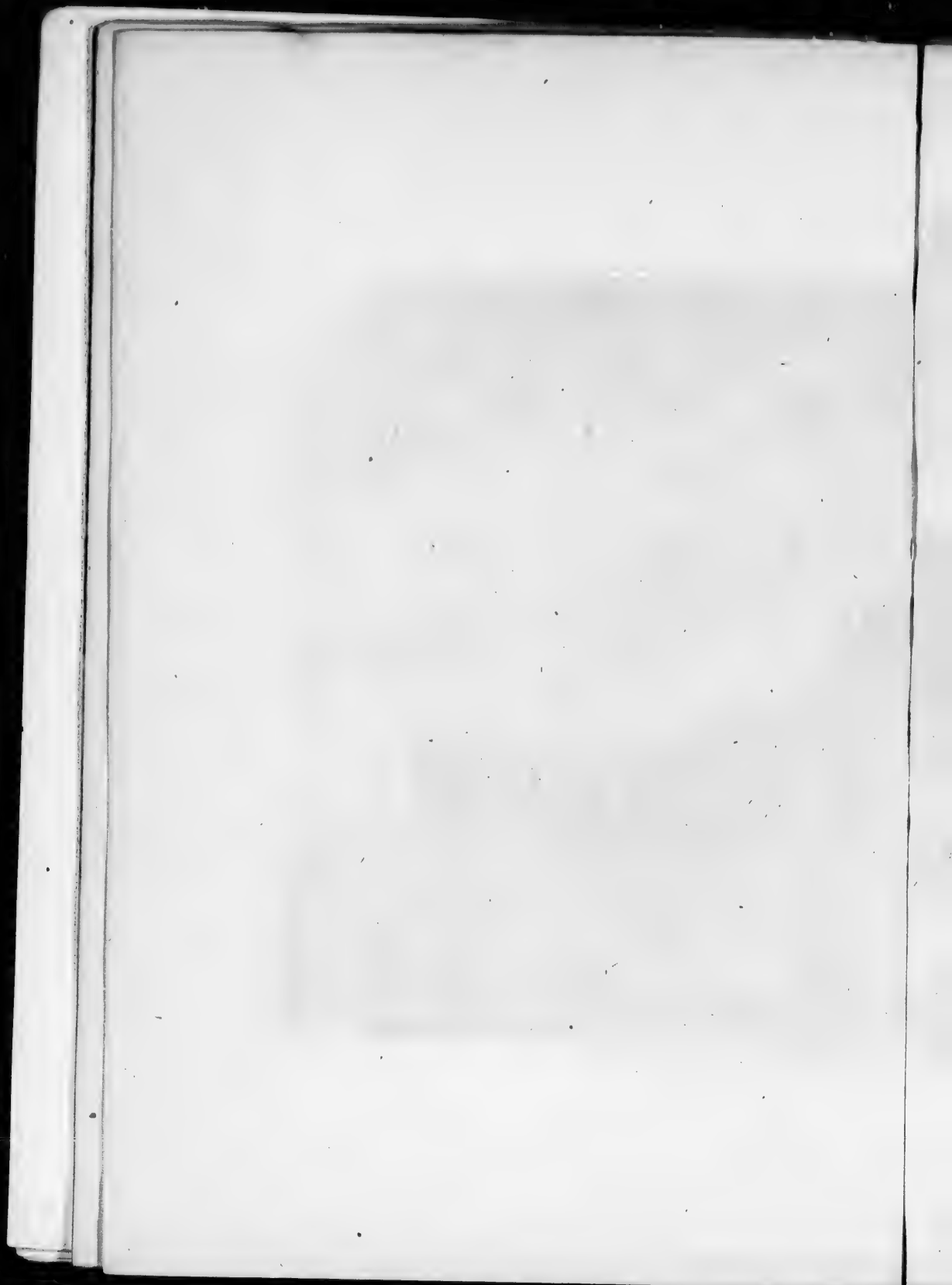


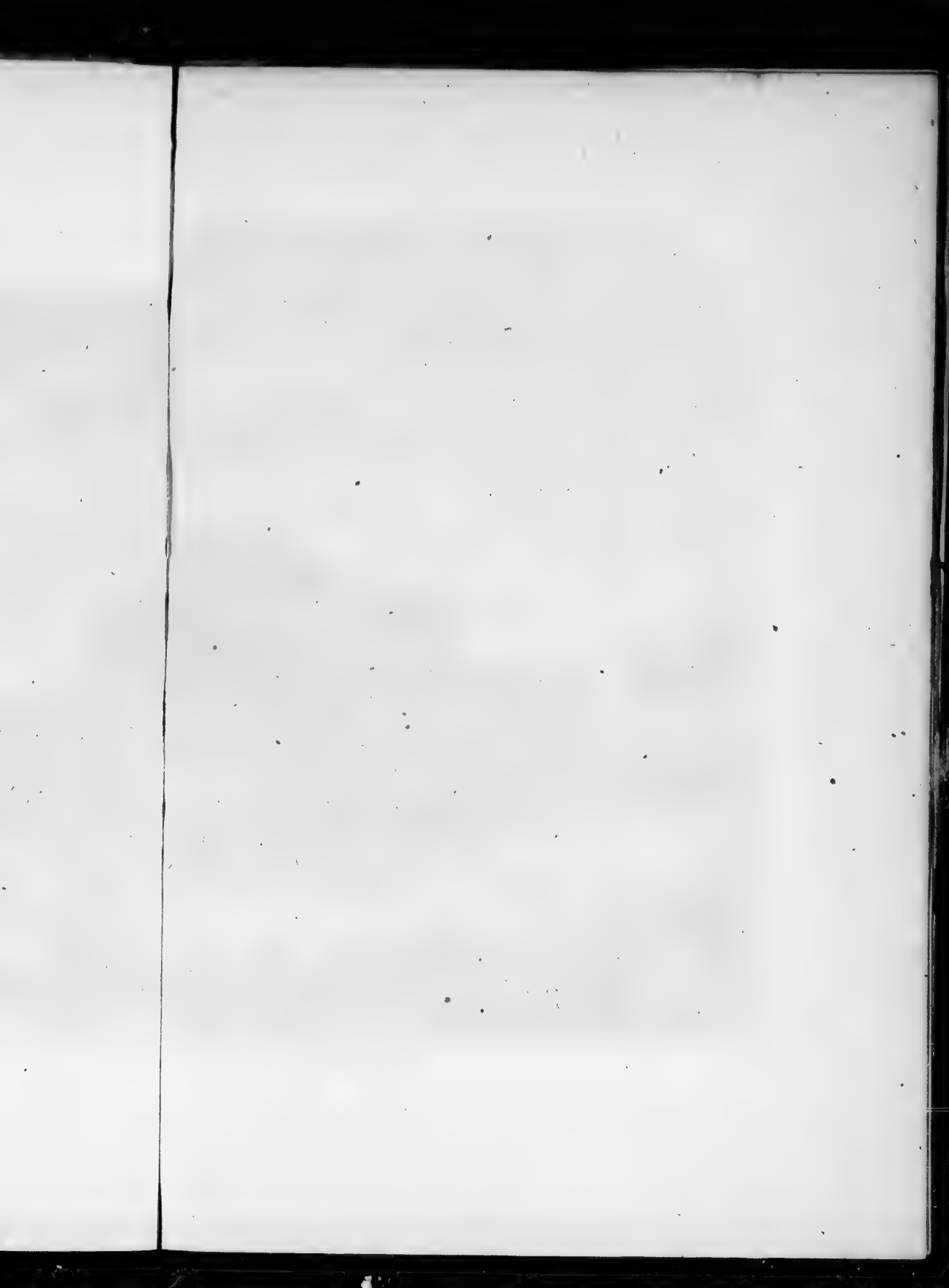
ART GALLERY—PHILADELPHIA—



GALLERY—PHILADELPHIA—PALAIS DES BEAUX ARTS.

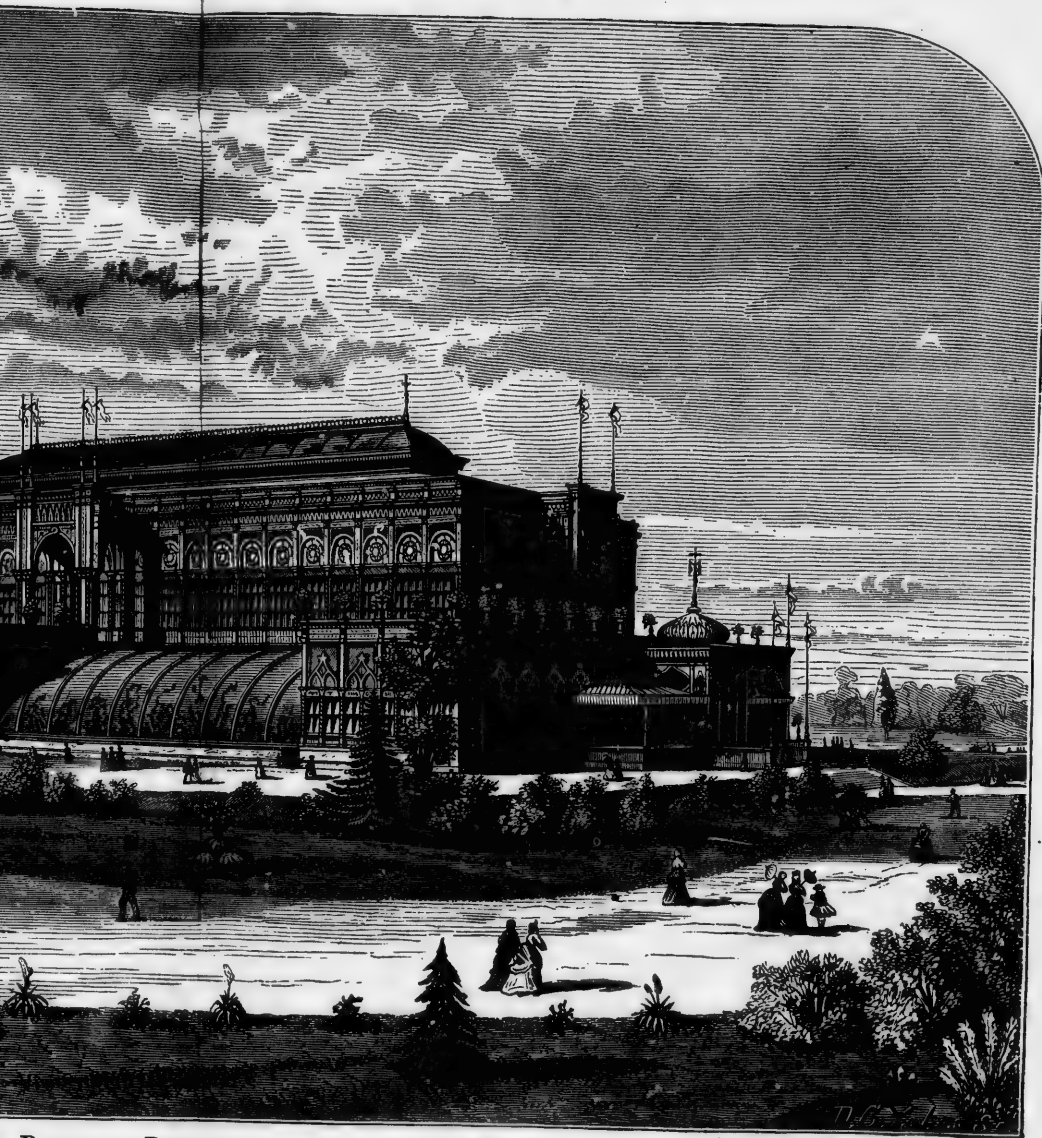




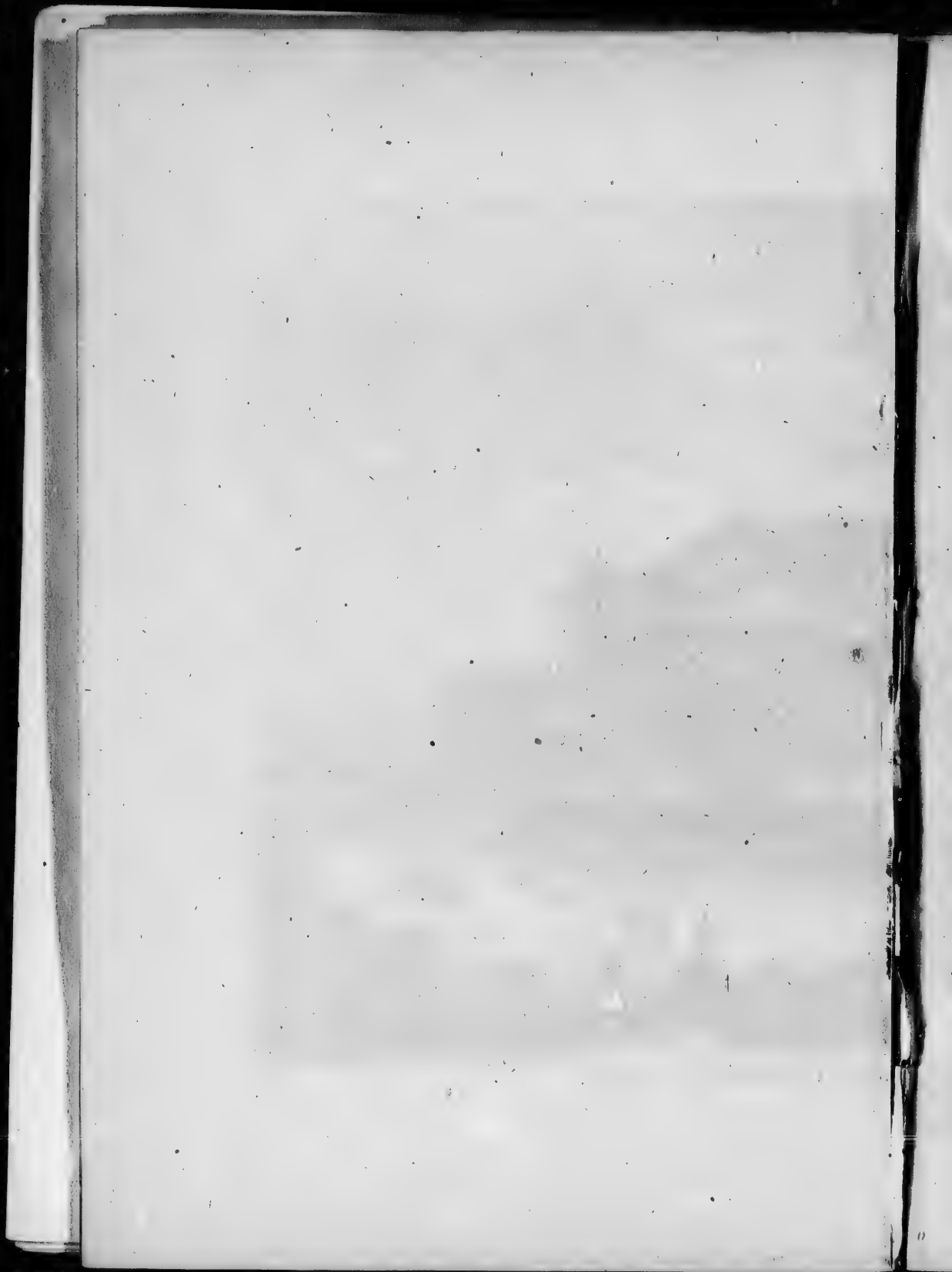


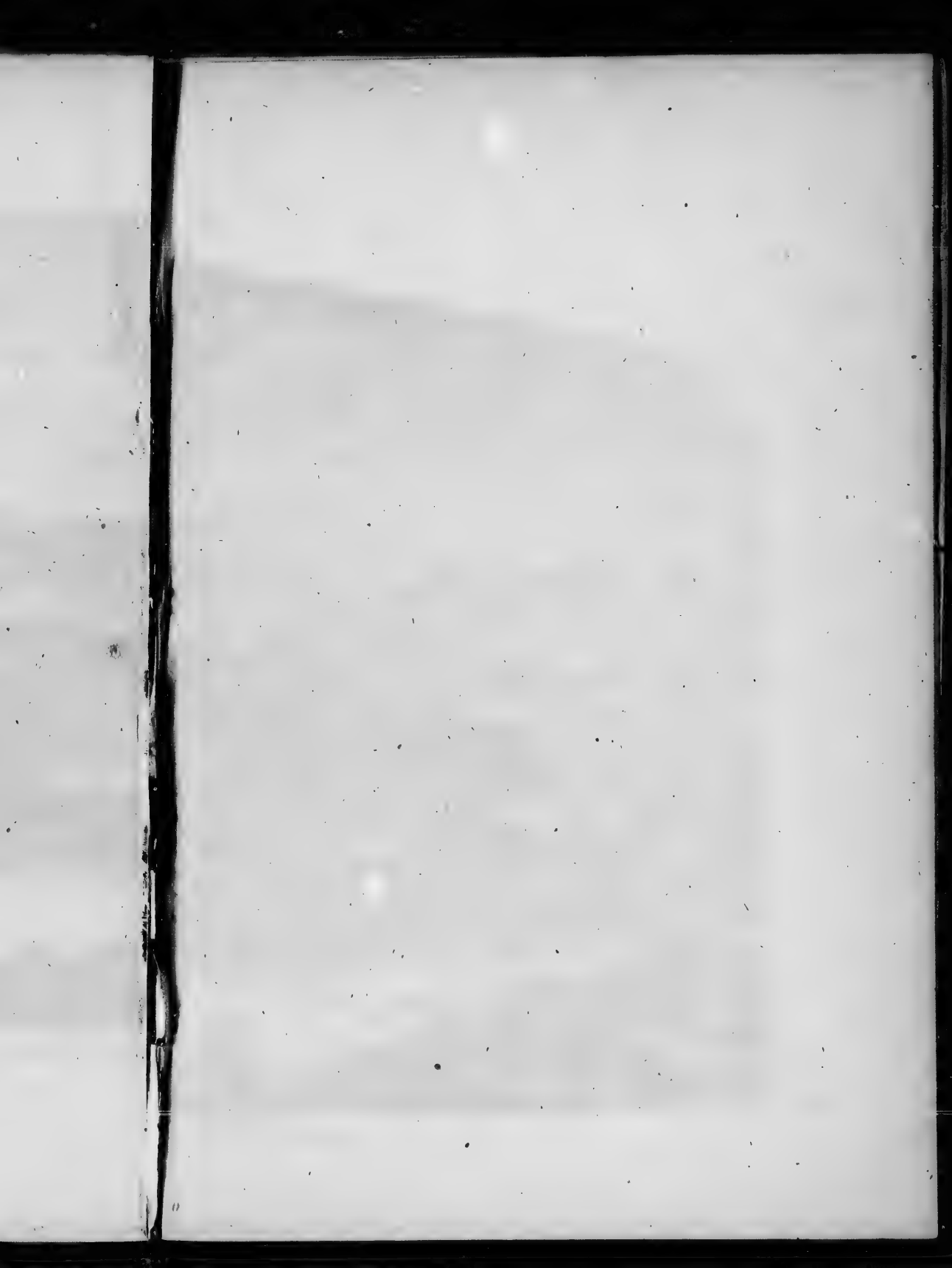


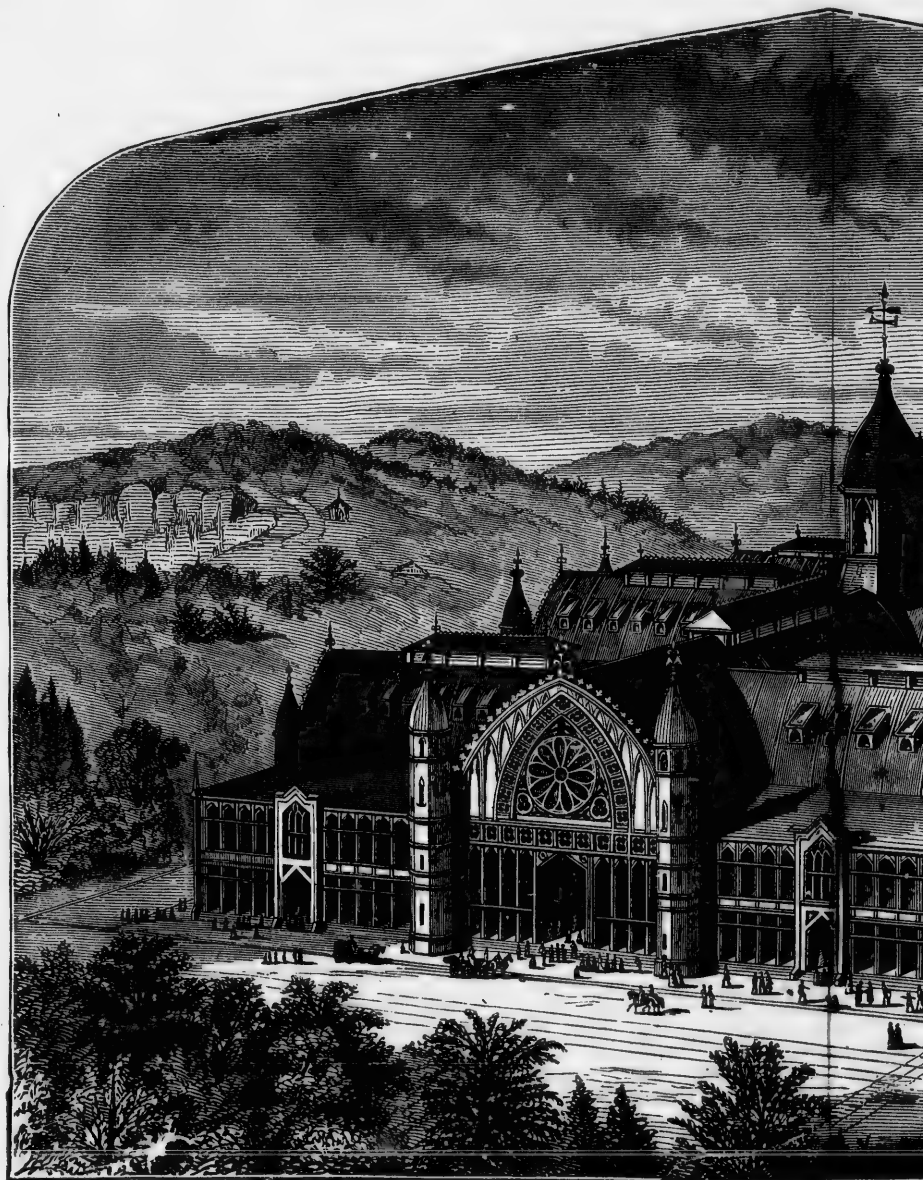
HORTICULTURAL BUILDING—PHILADELPHIA



L BUILDING—PHILADELPHIA—DEPARTEMENT HORTICOLE.

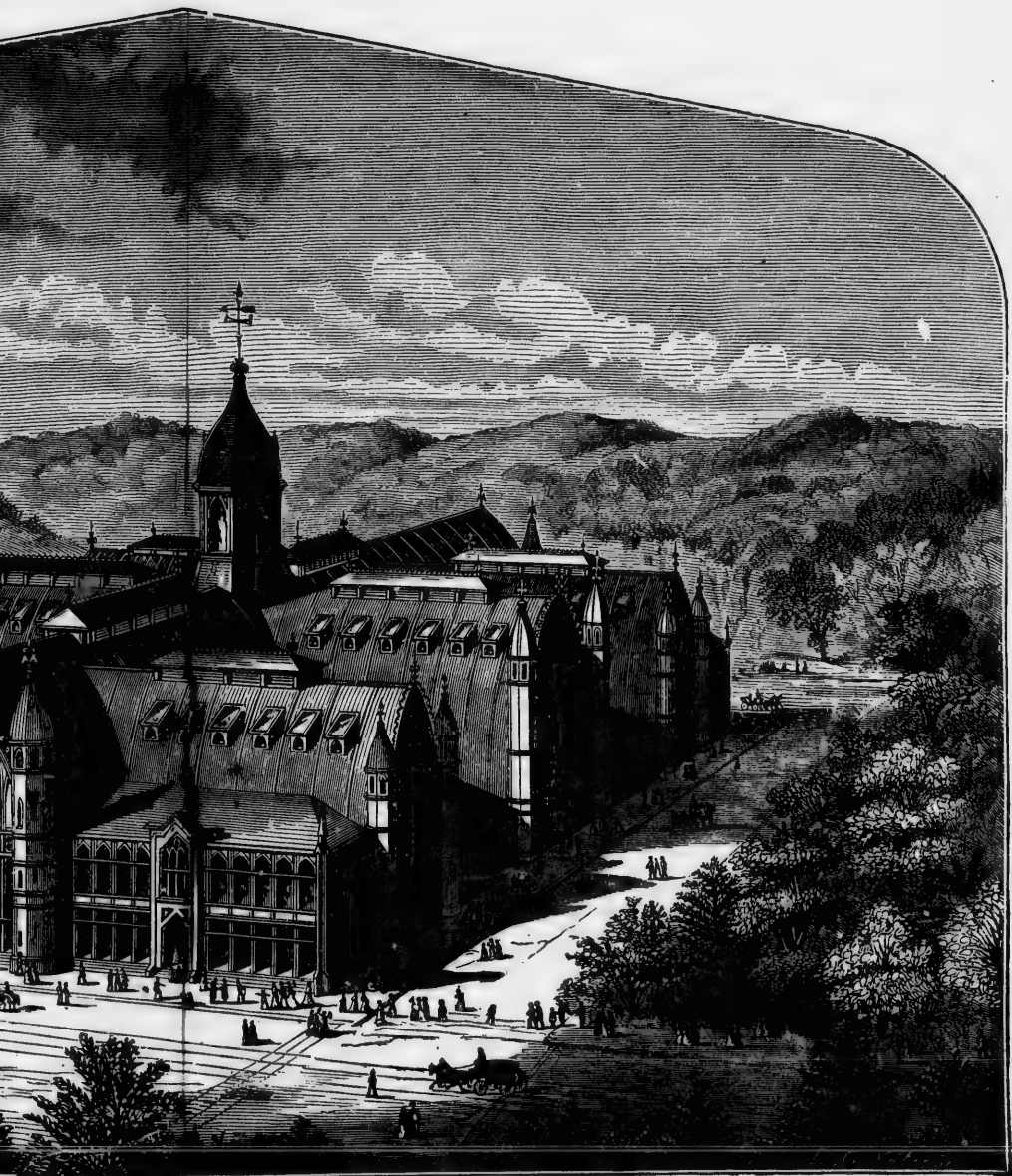






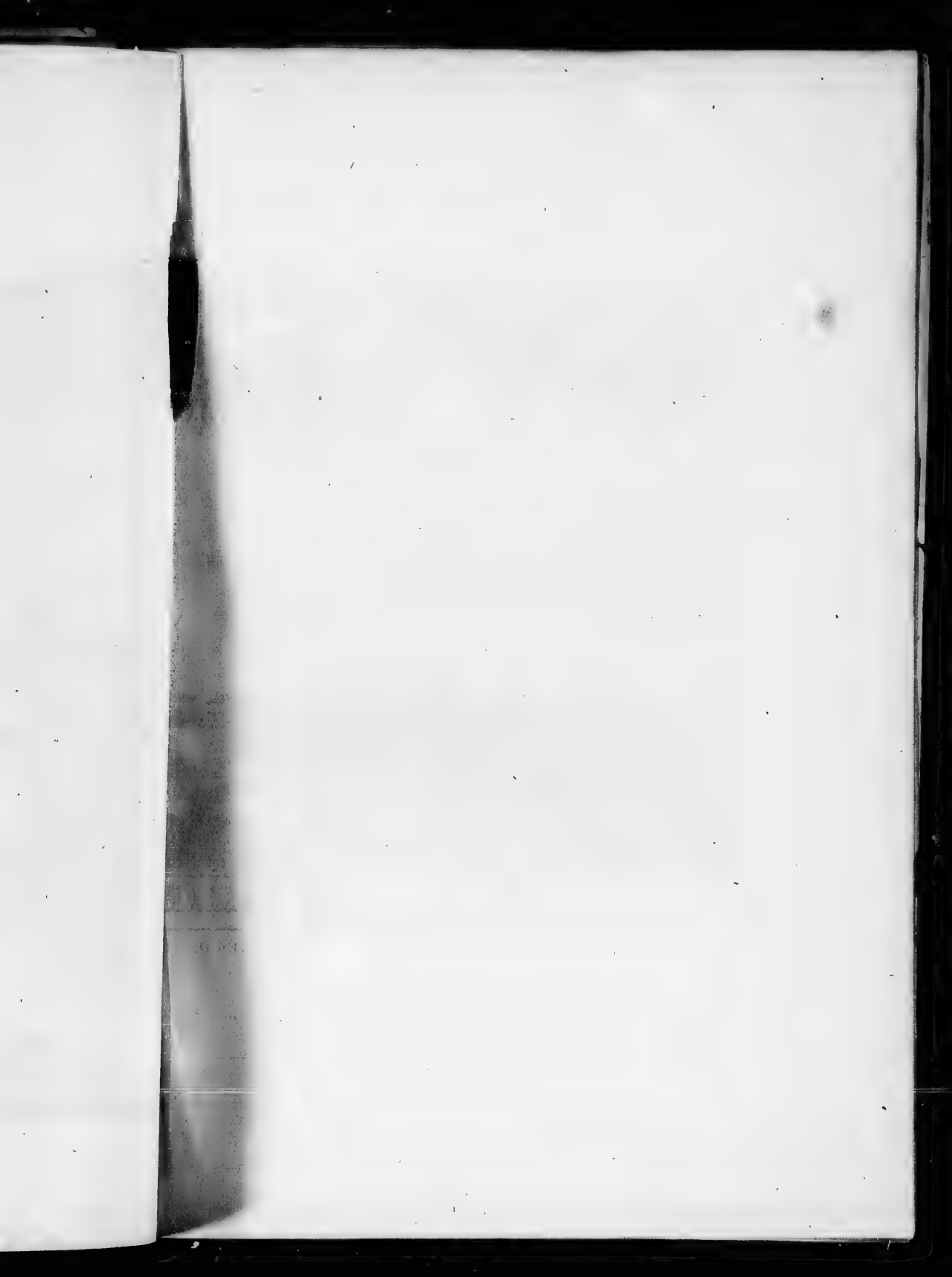
AGRICULTURAL BUILDING—PHILADELPHIA—



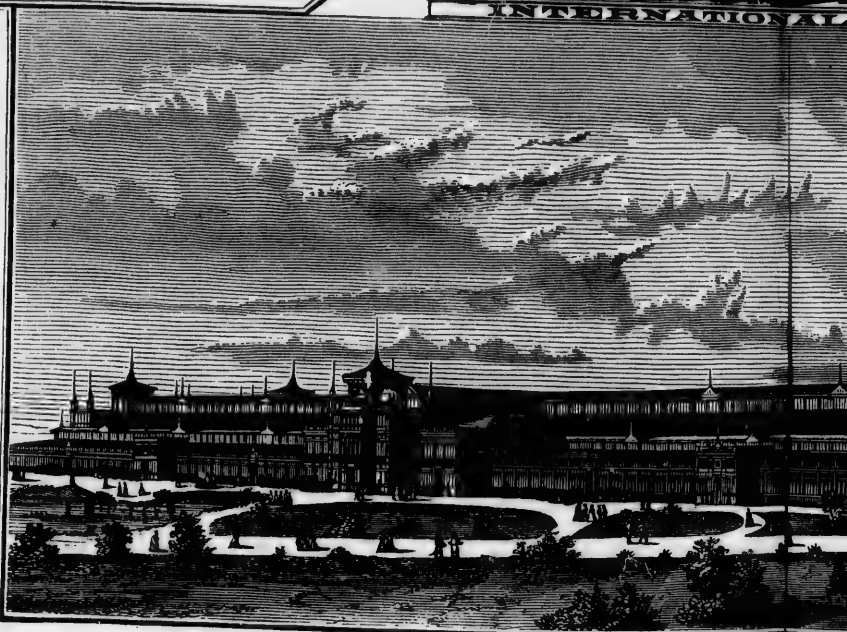
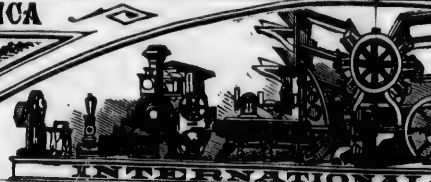


BUILDING—PHILADELPHIA—DEPARTEMENT AGRICOLE.



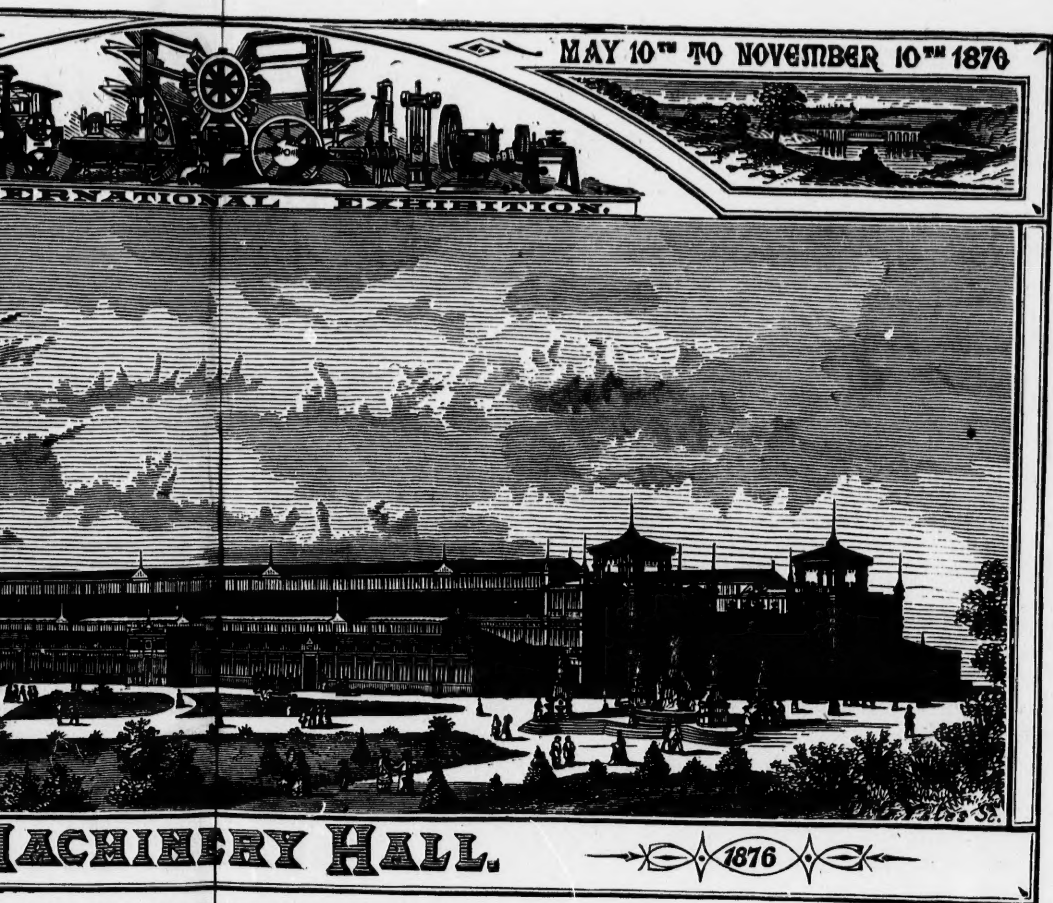


PHILADELPHIA U.S. AMERICA



**MACHINERY**

GALERIE DES MACHINES DE L'EXPOSITION



MAY 10<sup>TH</sup> TO NOVEMBER 10<sup>TH</sup> 1876

MACHINERY HALL.

1876

MACHINES DE L'EXPOSITION INTERNATIONALE DE 1876.







